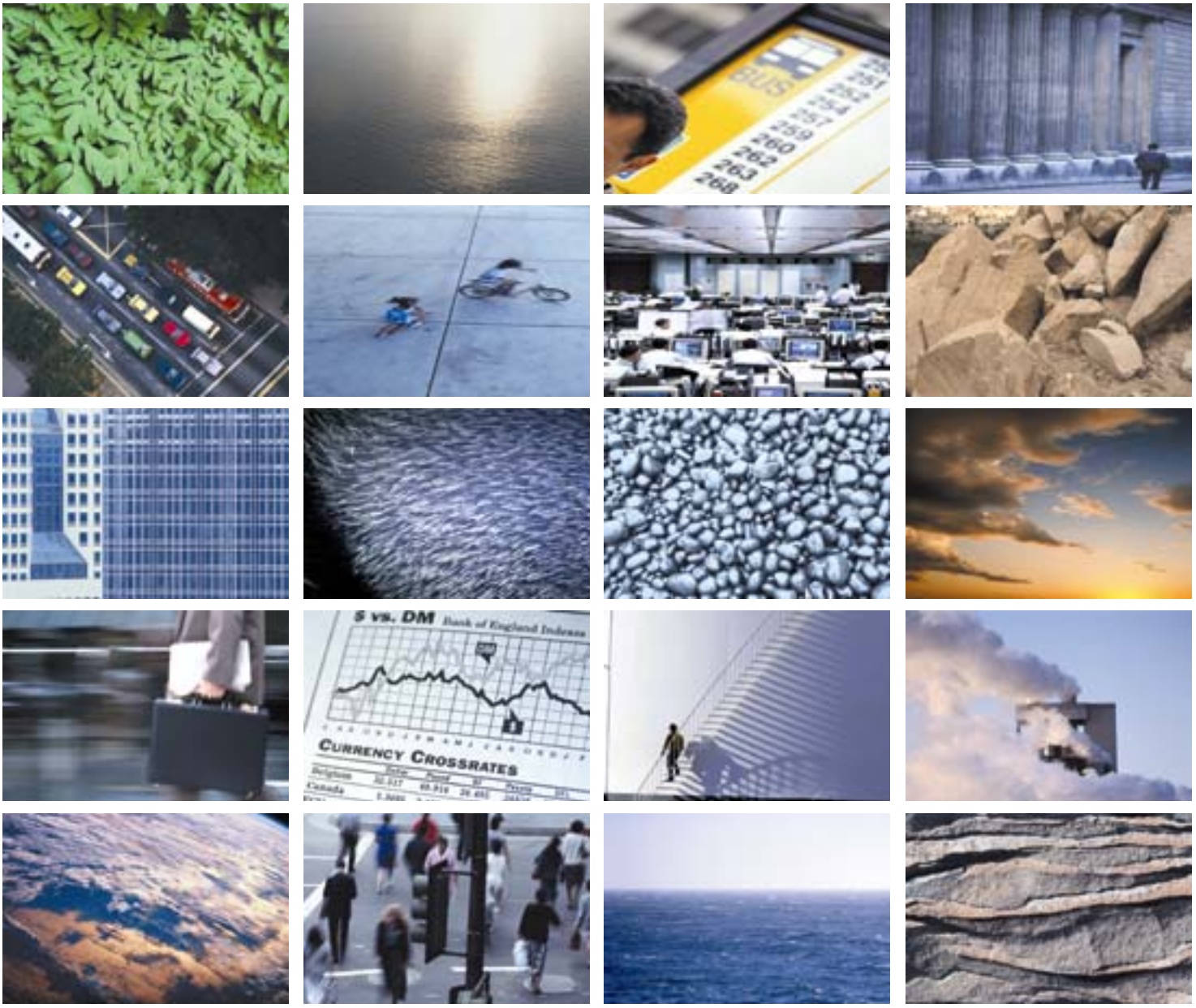

Burly Seal Self-Implementing PCB Cleanup and Disposal Work Plan

Presented to:
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1.0 INTRODUCTION

Environmental Resources Management (ERM) was retained by Seals and Packings, Inc. – Burly Seal Products Co. (Burly Seal) to prepare this Work Plan for conducting a cleanup of polychlorinated biphenyls (PCBs) at the Burly Seal facility located at 1865 West D Avenue, Building 604, in the Utah Industrial Depot (UID) in Tooele, Utah.

This Work Plan has been prepared to summarize characterization activities, provide a regulatory framework, detail the scope of the proposed cleanup and disposal activities, and provide verification sampling procedures.

The cleanup is being conducted pursuant to the performance-based disposal requirements of 40 CFR § 761.61(b), with the exception of porous materials, which are not addressed under the performance-based disposal requirements. Cleanup standards and verification procedures for porous materials, such as concrete and soil, are based on the self-implementing on-site cleanup requirements of 40 CFR § 761.61(a).

The self-implementing cleanup requirements of 40 CFR § 761.61(a) require notification in writing to the EPA Regional Administrator and the directors of the state and local environmental agencies and a written certification signed by the owner and party conducting cleanup. The Work Plan is being distributed to the listed agencies as required under 40 CFR § 761.61(a)(3) for the portions of the cleanup that impact porous materials. The required certification is included as Section 10.

1.1 FACILITY DESCRIPTION

Burly Seal leases approximately 32,000 square feet of Building 604 in the UID. Figure 1 shows the location of the Facility. Burly Seal moved its operations from Los Angeles, California to the current location in 2003. Seals and Packings, Inc. purchased the assets of Burly Seal in 2005.

The site is used for the manufacture of homogenous rubber and rubber/fabric seals. Facility activities include production of the seals using hydraulic presses, packaging, shipping, and administration.

The facility uses heat and hydraulic pressure to create rubber seals in various hydraulic presses. The facility has 34 hydraulic presses that moved with the company from Los Angeles to Utah, which are located in the press room in the southern portion of the building. Figure 2 shows a

process flow diagram of the equipment located in the press room and the oil and steam circulation systems. Hydraulic oil is circulated through piping to interconnected groups of presses. There are two main hydraulic oil circulating systems, each with its own piping, and with pumps and oil reservoir(s) located in the boiler room. In addition, six hydraulic presses have their own independent hydraulic oil circulation systems and reservoirs, and do not share a plumbed hydraulic oil connection with the other equipment. Twenty-three of the presses are operated using steam for heat, and are connected by steam lines to a boiler located in the boiler room. The remaining presses use electricity to provide heat. There are other new hydraulic presses located in other areas of the facility (i.e., north side); however, they operate independent of the connected systems, and have been shown to have no PCB contamination.

During operation, the presses on the south side of the facility leaked oil which came into contact with water from steam used in the process and collected in oil pans below the equipment. In the past, the facility drained oily water from the pans, separated the oil and water, and stored the water (with some residual oil) in totes for pick-up by an oil recycler. The recovered oil was reused in the systems to top off reservoirs. Not all leaked oil was captured in the pans below the equipment; some oil has come into contact with the concrete floor in the press room and boiler room, and has been soaked up with absorbent materials.

1.2 BACKGROUND

The U.S. Environmental Protection Agency, Region 8 (EPA) inspected Burly Seal and conducted sampling on March 10, 2010, and conducted an inventory inspection on August 24, 2010. Based on the EPA's site assessment activities, the EPA submitted a letter to Burly Seal on October 27, 2010 requiring certain activities, including providing a schedule for off-site disposal of PCB-contaminated materials and identifying facilities at which disposal will occur. Section 6.0 of this Work Plan identifies facilities at which disposal will occur, and Section 9.0 provides a schedule for off-site disposal.

Table 1 identifies PCB contaminated materials and suspected PCB impacted materials based on sampling by the EPA and additional characterization sampling described in Section 2.0, with their estimated quantities. Figure 3 shows the locations of affected equipment and materials considered subject to remediation.

Table 1 - Estimated Material Quantities

Material	Estimated Quantity
Liquid hydraulic oil currently in the system	1,300 gallons
Oil and/or oily water that has leaked from the hydraulic presses and collected in pans or been placed in drums	950 gallons
Poly totes containing oily water	Two 330-gallon totes containing approx 3 inches of material each
Absorbent materials used for spill clean up	5 cubic yards
Materials in a metal roll-off bin that was used to accumulate oily absorbents and solid waste	5 cubic yards
Hydraulic presses	34 presses, various sizes with average estimated weight of 2 tons each
Piping, pumps, oil-water separator, oil reservoirs (after oil removal)	120 cubic yards (6 roll-off bins)
Concrete floors (concrete slabs are approximately 7 inches thick)	Approximately 5,000 ft^2 requiring cleaning; Approximately 140 ft^2 requiring removal (trench removal two feet wide and 70 feet long along slab seams removed)
Soil beneath slab seams	Approximately 3-4 cubic yards (assumes removal of 6 inches of soil beneath slab seams and bulking factor)
Wall surfaces – lightweight foam acoustical wall material in boiler room	280 ft^2

Material	Estimated Quantity
Wall surfaces – damaged drywall in press room	Approximately 5 ft^2
Wooden platforms, shelving, and other structural materials (assumed PCB-contaminated)	80 cubic yards (4 roll-off bins)

2.0 SITE CHARACTERIZATION RESULTS

Characterization of PCB contamination at the facility is based on samples collected by the following agencies, owners and others:

- EPA during an inspection of the Burly Seal facility on March 10, 2010
- Contractor for Burly Seal on March 15, 2010
- Samples from the roll-off bin collected by MP Environmental
- Building materials sampling by ERM on April 26, 2011
- Visual observations of oil staining by ERM

2.1 SAMPLES COLLECTED BY EPA

The EPA inspected Burly Seal on March 10, 2010 and collected five samples that were sent to the laboratory for PCB analysis. The laboratory report is included in Appendix A. Table 2 summarizes the sample locations and results.

Table 2 – EPA Sample Results

Sample ID	Material	Location/Description	Result (ppm)[1]
1	Absorbent/ floor dry	Tote sitting by roll-off bin	40
3	Oily sludge	West tote	73,000
5	Oily sludge	East tote	380
6	Oil	Drum in southeast corner press room	140
7	Oil	Drum in middle of south wall in press room	230

[1] Parts per million (ppm)

2.2 SAMPLES COLLECTED BY BURLY SEAL'S CONTRACTOR

Following the EPA inspection, Burly Seal retained a contractor to perform additional sampling for PCBs. Fred Straughn of PSC collected 38 samples of materials from the facility on March 15, 2010, including six samples of oil from equipment in the northern portion of the facility to confirm that PCB contamination was not present in the new hydraulic equipment. Mr. Straughn returned to the facility on May 18, 2010 to collect two additional samples of oil from the elevated hydraulic reservoirs from the stand-alone

hydraulic presses (the "A" group presses). The laboratory reports are included in Appendix A. Table 3 summarizes these sample locations and results.

Table 3 – Burly Seal Sample Results

Sample ID	Material	Location/Description	Result (ppm)
1	Oil	Boiler room – new drum of oil	ND
2	Oil	Boiler room – tote	32,000
3	Oil	Boiler room – tote	830
4	Solid	Boiler room – drum of solid waste (absorbents)	54
5	Oil	Press room – drum of oil	110
6	Solid	Press room – absorbents in small container	45
7	Oil	Press room – oil in hydraulic press oil leak collection pan	100
8	Oil	Press room – oil in hydraulic press oil leak collection pan	140
9	Oil	Press room – oil in hydraulic press oil leak collection pan	120
10	Oil	Press room – drum of oil	100
11	Solid	Press room – solids in bucket	82
12	Oil	Press room – oil in bucket	140
13	Oil	Press room – oil in hydraulic press oil leak collection pan	120
14	Oil	Press room – oil in hydraulic press oil leak collection pan	220
15	Solid	Press room – absorbents on floor by oil leak collection pan	56
16	Water/oil	Press room – drum of water/oil	130
17	Oil	Press room – drum of oil	180
18	Water/oil	Press room – drum of water/oil	230
19	Water/oil	Press room – drum of water/oil	250
20	Water/oil	Press room – drum of water/oil	210
21	Oil	Press room – oil in hydraulic press oil leak collection pan	110
22	Oil	Press room – oil in hydraulic press oil leak collection pan	110
23	Oil	Press room – oil in hydraulic press oil leak collection pan	150
24	Oil	Press room – oil in hydraulic press oil leak collection pan	180
25	Oil	Press room – oil in hydraulic press oil leak collection pan	130
26	Oil	Press room – drum of oil	120

Sample ID	Material	Location/Description	Result (ppm)
27	Solid	Roll-off bin solid absorbent material	59
28	Oil	Roll-off bin accumulated liquid oil	1,700
29	Soil	Outdoors – soil (near power pole – former pole mounted transformers)	0.88
30	Soil	Outdoors – soil (near pad mounted transformer)	1.3
31	Water	Boiler room – drum of water	ND
32	Water	Boiler room – drum of water	3.6
33	Oil	Equipment – north side of building	ND
34	Oil	Equipment – north side of building	ND
35	Oil	New drum of oil in north side of building	ND
36	Oil	Equipment – north side of building	ND
37	Oil	Equipment – north side of building	ND
38	Oil	Equipment – north side of building	ND
1W	Oil	Press room, elevated hydraulic reservoir for press A5	350
2E	Oil	Press room, elevated hydraulic reservoir for press A4	220

ND – Not detected above laboratory detection limit

2.3 *SAMPLES COLLECTED BY MP ENVIRONMENTAL – ROLL-OFF BIN SAMPLING*

MP Environmental collected a sample from the roll-off bin on March 15, 2010 and submitted it to the laboratory for PCB analysis. ERM is not aware of whether the sample collected was a grab sample or a composite sample. The sample matrix is identified on the laboratory report as soil, and the Chain-of-Custody identifies the sample as "PCB in Soil," so ERM assumes the sample was taken from solid (sorbent) material in the roll-off bin. The reported PCB concentration in the sample was 190 ppm. The laboratory report is included in Appendix A.

2.4 *SAMPLES COLLECTED BY ERM – FLOOR AND WALL SAMPLING*

In April, 2011, ERM collected representative samples of building surface materials and soil beneath seams in the concrete floor to characterize potential PCB impacts above cleanup levels on building surfaces and in soil. ERM collected four samples of the concrete floor to a depth of 7.5 centimeters (cm), four wipe samples of painted metal wall surfaces, and five samples of porous wall surfaces. ERM also contracted with a concrete

coring company to drill three holes through the concrete floor at seams in the slab floor to obtain samples of soil beneath the seams. Sample locations are shown on Figure 4. The laboratory report is included in Appendix B. The table below summarizes the sample locations and results.

Table 4 – ERM Characterization Sample Results

Sample ID	Material	Location/Description	Result
C1	Concrete	Southeast side of press room, 0-7.5 cm	ND
C2	Concrete	Middle of press room, 0-7.5 cm	11.2 mg/kg
C3	Concrete	Northwest side of press room, 0-7.5 cm	1.06 mg/kg
C4	Concrete	Boiler room, 0-7.5 cm	3.69 mg/kg
S1	Soil	Soil beneath floor seam, northeast side of press room	ND
S2	Soil	Soil beneath floor seam, middle of press room	12.9 mg/kg
S3	Soil	Soil beneath floor seam, southwest side of press room	0.017 mg/kg (J)
PW1	Painted metal wall surface	Wipe sample of painted metal wall surface (post), east side of press room	1.49 µg/100 cm^2
PW2	Porous wall surface	Grab sample of exposed fiberglass insulation from wall, east side of press room	0.249 mg/kg (J)
PW3	Painted metal wall surface	Wipe sample of painted metal wall surface (roll-up door), east/middle press room	0.349 µg/100 cm^2
PW4	Painted metal wall surface	Wipe sample of painted metal wall surface (electrical panel), west/middle press room	2.67 µg/100 cm^2
PW5	Painted metal wall surface	Wipe sample of painted metal wall surface (post), west side of press room	2.37 µg/100 cm^2
PW6	Porous wall surface	Grab sample of damaged drywall from wall, west side of press room	2.39 mg/kg
BW1	Porous wall surface	Grab sample of acoustical wall surface, boiler room	34.6 mg/kg
BW2	Porous wall surface	Grab sample of acoustical wall surface, boiler room	22.9 mg/kg
BW3	Porous wall surface	Grab sample of acoustical wall surface, boiler room	476.0 mg/kg

J - Estimated value between the method detection limit and the reporting limit.
mg/kg – milligrams per kilogram
µg/100 cm^2 – micrograms per 100 square centimeters (wipe sample result)

2.5 VISUAL EVIDENCE

Several materials at the site were assumed to be PCB-contaminated based on visual evidence of contact with PCB oil. Rather than sampling all materials that appear to have come into contact with PCB oil, Burly Seal intends to dispose of materials in the press room and boiler room that are likely to have come into contact with or show visible evidence of contact with PCB-affected oil. Such materials include wooden and metal employee work platforms, shelving, small plastic totes and buckets used for oily absorbents, and other miscellaneous materials.

3.0 REGULATORY FRAMEWORK

The Toxic Substances Control Act (TSCA) authorized the EPA to control substances that were determined to cause unreasonable risk to public health or the environment. The current PCB regulations in Title 40 of the Code of Federal Regulations Part 761 (40 CFR 761) were published pursuant to this act.

Burly Seal received a letter from the EPA dated October 27, 2010 requiring documentation of off-site disposal of all PCB-contaminated items according to the requirements of 40 CFR 761.60 and/or documentation of decontamination in accordance with 40 CFR 761.79. The table below summarizes some of the sections of the PCB regulations most applicable to this Work Plan.

Table 5 - Applicable TSCA PCB Regulations

Activity	**Applicable Regulations / Specifications**
Use of PCBs in hydraulic systems (PCBs may only be used in hydraulic systems at a level <50 ppm)	40 CFR 761.30(e)
Authorizations (continued use of porous surfaces contaminated with PCBs regulated for disposal by spills of liquid PCBs)	40 CFR 761.30(p)
Use of decontaminated equipment, structures, or other non-liquid and liquid materials	40 CFR 761.30(u)
Marking for disposal	40 CFR 761.40(h) storage and/or transport; 40 CFR 761.61(a)(4)(B) on site residual
Disposal requirements	40 CFR 761.60
PCB remediation waste: self-implementing cleanup requirements and performance-based disposal requirements	40 CFR 761.61
Storage for disposal	40 CFR 761.65
Decontamination standards and procedures	40 CFR 761.79
Notification and manifesting	40 CFR 761 Subpart K

3.1 CLEANUP LEVELS

40 CFR 761.61 sets standards for self-implementing cleanup, performance-based disposal, or risk-based disposal approval requirements, and designates cleanup levels and disposal requirements for different types of PCB remediation wastes and different occupancy levels.

The cleanup is being conducted pursuant to the performance-based disposal requirements of 40 CFR § 761.61(b), with the exception of porous materials, which are not addressed under the performance-based disposal requirements. Cleanup levels for porous materials, such as concrete and soil, will be based on the self-implementing onsite cleanup requirements of 40 CFR § 761.61(a).

The cleanup standards for high occupancy areas apply to this facility as it is intended for routine worker use and presence. The high occupancy PCB cleanup standards for specific types of remediation wastes are listed below, and the types of wastes are then further described.

- Bulk PCB remediation waste: less than or equal to one ppm without further conditions.

- Porous surfaces: less than or equal to one ppm without further conditions; porous surfaces above this level may be left in place if cleaned and provided with a barrier and warning labels per 40 CFR 761.30(p).

- Non-porous surfaces: less than or equal to 10 micrograms per 100 square centimeters (≤10 µg/100 cm^2) without further conditions.

- Liquids: Various decontamination and cleanup standards for liquid PCB wastes are provided in 40 CFR 761.79(b)(1) and (2); however, no liquid PCB wastes will be left on site; the PCB liquid disposal requirements discussed in Section 3.3 are applicable to the facility.

Waste materials contaminated with PCBs resulting from a spill, an intentional or accidental release, or uncontrolled discharges of PCBs or other unauthorized disposal of PCBs are called PCB remediation waste. There are four types of PCB remediation waste: (1) bulk PCB remediation waste (e.g., soil), (2) porous surfaces, (3) non porous surfaces, and (4) liquid PCBs. These categories are further defined below.

The four classes of PCB remediation waste commonly found at PCB remediation sites include:

- Bulk PCB remediation waste including, but not limited to, oil absorbents, existing piles of soil, in-situ soil, sediments, dredged materials, muds, PCB sewage sludge, and industrial sludge.

- Porous surfaces including, but not limited to, non-coated (e.g., unpainted) or coated structural surfaces such as floors, walls, and ceilings made of concrete, brick, wood, plaster, plasterboard, etc ., that have been subsequently contaminated by spills from PCB liquids. Porous surfaces also include paints or coatings that have been applied to a non-porous surface such as metal.

- Non-porous surfaces including smooth unpainted solid surfaces that limit penetration of liquid containing PCBs beyond the immediate surface (e.g., smooth uncorroded metal, natural gas pipe with a thin porous coating originally applied to inhibit corrosion, smooth glass, smooth glazed ceramics, impermeable polished building stone such as marble or granite, and high density plastics such as polycarbonates and melamines that do not absorb organic solvents).

- Liquid PCBs, a homogenous flowable material containing PCBs and no more than 0.5 percent by weight non-dissolved material.

PCB remediation waste must be managed at its "as-found" PCB concentration based on in-situ characterization data (i.e., “as found” per 40 CFR 761.61) rather than post-excavation or post-demolition composite samples collected from waste piles and roll-off containers and includes, but is not limited to: soil, rags, and other debris generated during a cleanup; environmental media containing PCBs, such as soil and gravel; buildings and other man-made structures contaminated with PCBs; and porous and non-porous surfaces upon which PCBs were spilled or released (see the definition at 40 CFR 761.3).

3.2 DECONTAMINATION REQUIREMENTS

The performance-based disposal requirements of 40 CFR 761.61(b) require specific disposal methods for liquid and non-liquid PCB remediation waste, or allow decontamination of these materials under 40 CFR 761.79. 40 CFR 761.30(u) allows for the continued use or reuse of equipment, structures, other non-liquid or liquid materials that were contaminated with PCBs during manufacture, use, servicing, or because of spills from, or proximity to, PCBs ≥50 ppm, provided the materials were decontaminated in accordance with 40 CFR 761.79 or another applicable

EPA PCB spill cleanup policy, or if the material meets the applicable decontamination standard in 40 CFR 761.79(b) without decontamination.

40 CFR 761.79 sets decontamination standards and procedures for removing PCBs from materials, including non-porous surfaces and non-porous surfaces covered with a porous surface, such as paint or a coating on metal. Materials that have been decontaminated in accordance with 40 CFR 761.79 may be used or reused as described above, or are unregulated for disposal under Subpart D of 40 CFR 761.

The proposed cleanup includes the removal and disposal of hydraulic presses and other equipment contaminated with PCBs; therefore, decontamination standards for reuse of the hydraulic equipment are not addressed in this Work Plan. The following decontamination requirements apply to building surfaces that may remain following the cleanup, and to the MP Environmental roll-off bin that will be returned to the vendor for reuse following cleanup:

- For the MP Environmental roll-off bin and for painted metal wall surfaces: Based on 40 CFR 761.79(b)(3), the decontamination standard for unrestricted use for a non-porous surfaces covered with a porous surface, such as paint or a coating on metal, is cleaning to the National Association of Corrosion Engineers (NACE) Visual Standard No. 2 (near-white blast cleaned surface finish), or for disposal in a smelter if cleaning to the NACE Visual Standard No. 3. The regulation allows for visual inspection to verify that the NACE standard has been achieved; however, based on correspondence with the EPA, wipe sampling may be used to confirm that the surface meets the non-porous material decontamination standard. The non-porous material decontamination standard for unrestricted use is ≤10 µg/100 cm^2.

- For concrete and porous wall surfaces: There is no decontamination standard or procedure listed in 40 CFR 761.79 for porous materials (wooden or other porous wall surfaces and concrete) contaminated with PCBs from a spill that is greater than 72 hours old. Therefore, for concrete, the cleanup level of one ppm from 40 CFR 761.61 provided in Section 3.1 applies.

3.3 DISPOSAL REQUIREMENTS

PCB remediation wastes, as defined in Section 3.1, and cleanup wastes must be disposed of using one of the approved disposal options provided

in 40 CFR 761.61 (or a combination, if appropriate), which lists disposal options for the various types of wastes and also allows disposal technologies approved under 40 CFR 761.60 (Disposal Requirements) and 40 CFR 761.70 (Incineration).

Materials decontaminated to the standards provided in 40 CFR 761.79, as described in Section 3.2, are unregulated for disposal under Subpart D of 40 CFR 761.

Table 6 - PCB Disposal Facilities Approved under Subpart D

PCB Disposal Facilities Approved under Subpart D	
Incinerators	40 CFR 761.70
High Efficiency Boilers	40 CFR 761.71
Scrap Metal Recovery Ovens and Smelters	40 CFR 761.72
TSCA PCB Chemical Waste Landfills	40 CFR 761.75
Other Types of Disposal Facilities	
RCRA Subtitle C Landfill	Permitted by EPA under Section 3004 of RCRA or by the State under Section 3006
Municipal Solid Waste Landfill	Facility permitted, licensed, or registered by the State to manage municipal solid waste subject to Part 258
Non-municipal, Non-hazardous Waste Facility	Facility permitted, licensed, or registered by the State to manage non-municipal, non-hazardous waste subject to Sections 257.5 through 257.30

The first four disposal methods in the table above are collectively referred to as "TSCA PCB disposal facilities." In addition to the disposal options listed in the table above, alternate disposal methods may be allowable under one of the following approvals:

1. Alternative technology: Using an alternate disposal technology (e.g., chemical dechlorination) that has been approved by an EPA Regional Administrator or the Director, National Program Chemicals Division in the Office of Pollution Prevention and Toxics as achieving a level of performance equivalent to an incinerator (specific requirements are located at 40 CFR 761.60(e)).
2. Coordinated approval: In accordance with a TSCA PCB Coordinated Approval issued by an EPA Regional Administrator for the Region in

which the PCB activity is located pursuant to the requirements specified at 40 CFR 761.77. Under a Coordinated Approval, the Regional Administrator may accept, with or without additional conditions, PCB cleanup requirements which are implemented under a different authority.

3. Risk-based disposal approval: In accordance with a TSCA PCB risk-based disposal approval issued by an EPA Regional Administrator for the Region in which the PCB activity is located in response to a written request to sample, cleanup or dispose of PCB remediation waste in a manner which is not provided for in the regulations (Specific requirements are located at 40 CFR 761.61(c).).

Disposal options listed in 40 CFR 761.61(b) for each type of waste are listed below:

- **Liquid PCB remediation waste** must be disposed of by decontamination under 40 CFR 761.79, according to an alternative technology approval, or according to disposal requirements listed in 40 CFR 761.60(a) for PCB liquids, which require incineration, unless the PCB concentrations are <500 ppm, in which case disposal in a high efficiency boiler is also authorized.

- **Non-liquid PCB remediation waste** must be disposed of by decontamination under 40 CFR 761.79, disposal in an incinerator under 40 CFR 761.70(b), according to an alternative technology approval, in a chemical waste landfill approved under 40 CFR 761.75, or in a facility with coordinated approval under 40 CFR 761.77.

Generators of PCB waste at concentrations of 50 ppm or greater must use a manifest (e.g., a Uniform Hazardous Waste Manifest) to ship that waste off site. A signed copy of each manifest must be retained for a period of three years (40 CFR 761.209(a)). The generic PCB identification number (i.e., "*40 CFR Part 761*") is required to be used as the identification number on the manifest by generators who do not have an on-site waste storage facility and existing EPA Identification number.

3.4 OTHER APPLICABLE REQUIREMENTS

- 40 CFR 761.60(b)(8) requires persons disposing of PCB articles, which includes hydraulic machines and other PCB articles such as pumps, to wear or use protective clothing or equipment to protect against dermal contact with or inhalation of PCBs or materials containing PCBs.

- 40 CFR 761.61(a)(9) and 761.79(f) require recordkeeping to document the various aspects of the cleanup, such as the source of the contamination, estimated or actual date of contamination, completion date of the cleanup, location and description of the contamination, pre-cleanup sampling data, description of solid surfaces that were cleaned, approximate depth of soil excavation and the amount of soil removed, and post-cleanup verification sampling data.

- PCB waste is subject to storage requirements in 40 CFR 651.65. Subject to certain conditions (see the provision at 40 CFR 761.65(c)(9)), bulk PCB remediation waste may be stored at the cleanup site or site of generation for 180 days .

- Notification and manifesting requirements for off-site movement of PCB waste for purposes of storage and/or disposal are listed in 40 CFR Part 761, Subpart K.

4.0 SCOPE OF CLEANUP AND DISPOSAL ACTIVITIES

A cleanup is proposed by Burly Seal for PCB contamination within the press room, the boiler room, the compressor room, and the roll-off bin located in the parking lot. The work will be performed in accordance with the requirements of 40 CFR 761.61, and decontamination of equipment for reuse will be performed in accordance with 40 CFR 761.79, as allowed under 40 CFR 761.61. The specific activities to be performed are described in this section.

4.1 SCOPE SUMMARY

During the cleanup, all of the PCB-contaminated materials and equipment will be removed and transported for off-site disposal. Hydraulic presses and oil-containing equipment and piping will be drained of free-flowing oil prior to loading for shipment; however, no other decontamination or cleaning of equipment or materials is required. Building surfaces, such as concrete flooring and wall surfaces, with PCBs over the high-occupancy cleanup standard of one ppm will be removed and transported for disposal. This alternative includes the following major components, which do not necessarily need to occur in the order listed:

- Mobilization and preparation for site work.
- Remove waste from the MP Environmental roll-off bin and clean the bin surfaces with solvent to meet the unrestricted use cleanup standard.
- General cleanup; remove oil from hydraulic press pans and place into drums and cleanup sorbent materials and place into bulk containers for disposal.
- Remove residual material from the bottom of the poly totes and place into drums for disposal.
- Remove miscellaneous materials that have or are likely to have PCB contamination, poly totes, portable pumps, employee work platforms, and shelving in the vicinity of the hydraulic presses. If necessary, cut materials to manageable lengths to place into roll-off bins for transportation to off-site disposal.
- Drain oil from hydraulic equipment and piping and place into drums for disposal. Drain liquids from the compressor room

oil/water separator and auxiliary equipment (pump, hoses, pan, etc.) and place into drums for disposal.

- Disconnect and disassemble hydraulic equipment and auxiliary equipment (piping, hoses, pumps, reservoirs, etc.). Disconnect and disassemble the oil/water separator. If necessary, cut equipment to manageable lengths to place into roll-off bins or onto flat-bed (or stake-bed) trucks for off-site transportation.

- Clean the concrete floors in press room and boiler room with detergent, environmentally-safe solvent and/or high pressure wash to achieve cleanup standard of one ppm.

- Remove portion of the concrete floor in the press room along the slab seams. Remove soil beneath the seams based on visual evidence of oil in soil and concrete. Remove portions of the concrete floor that do not meet the one ppm cleanup standard.

- Remove boiler room acoustical foam wall material. Remove damaged drywall in press room in vicinity of sample PW6.

- Verification sampling for the roll-off bin, the concrete floor, and soil to verify cleanup standards achieved (sampling to be conducted by ERM).

- Dispose of all waste materials (ERM will arrange for transportation and disposal).

- Final cleanup and demobilization.

Liquid waste will be transported to Clean Harbors' Aragonite facility for incineration. Solid waste materials will be transported in drums, roll-off bins, and by stake-bed truck to Clean Harbors' Grassy Mountain Landfill for disposal as TSCA PCB waste. Waste shipments will be accompanied by chain-of-custody documentation or hazardous waste manifests, as required.

4.2 PRELIMINARY ACTIVITIES/MOBILIZATION

Following the notice of award, the contractor will develop a site-specific health and safety plan (HASP), set up work zones, and develop decontamination procedures. Documents required to be submitted prior to mobilization are detailed in Section 5.0. These documents will be required prior to beginning on-site work.

Following the notice to proceed, the contractor will mobilize required materials and equipment for performance of the project, including equipment to move and load the hydraulic presses onto trucks (provided by ERM) for transport to the disposal facility. The contractor will provide drums for the collection of liquid wastes, as described in Section 4.11.

A site walk will be conducted by the contractor and ERM to identify and mark the areas and equipment subject to removal. The hydraulic oil overhead pipes will be identified, and the lateral extents for concrete to be cleaned and/or removed will be marked on the concrete surfaces with spray paint (or equivalent). The extent of concrete cleaning/removal at the selected locations will be based on visible staining and the analytical results obtained during the characterization sampling.

Utility clearance and lock-out tag-out procedures will be employed by the contractor with assistance from ERM and Burly Seal to assure that no active utilities are present in the work areas that could be damaged or encountered during the cleanup actions. The contractor will also examine accesses to the work areas, and the ability to safely perform the work during the site walk. Variation or modification to the Work Plan based on access or safety concerns will be documented by ERM and the contractor during the work.

4.3 CLEAN MP ENVIRONMENTAL ROLL-OFF BIN

The MP Environmental roll-off bin located in the Burly Seal parking lot shall be emptied and cleaned for return to the vendor. The following tasks will be performed by the contractor for the roll-off bin:

- Remove free-standing liquid from the roll-off bin into drum(s) using a portable pump
- Remove solid waste materials, including the plastic liner, from the roll-off bin and place it in a roll-off bin provided by ERM
- Clean the interior and exterior surfaces of the roll-off bin using a solvent to meet the unrestricted use cleanup standard of ≤10 µg/100 cm^2. Collect the solvent in drums for disposal.
- Confirmation sampling for the roll-off bin will be performed by ERM per the procedure in Section 7.0.

4.4 GENERAL CLEANUP

The contractor will perform general cleanup in the press room, boiler room, and compressor room to prepare for equipment disassembly and removal. General cleanup will consist of the following tasks:

- Remove oil and water from the pans beneath the hydraulic presses and hydraulic reservoirs and place into drums
- Remove absorbent pads, booms, and kitty-litter type floor dry and place into roll-off bins
- Move existing drums of oil, water, and solid debris to a waste staging area and consolidate partially full drums of liquid; provide equipment for loading drums onto transport vehicles provided by ERM.

4.5 REMOVE RESIDUAL LIQUID MATERIAL FROM TOTES

The contractor will remove liquid/sludge material from the bottom of the two poly totes in the boiler room and place it into drums. Material may be removed by portable pump, or if material is not pumpable, by cutting open the totes and removing the material using hand tools. The totes will be cut and handled by the contractor as PCB-affected debris for off-site disposal.

4.6 REMOVE MISCELLANEOUS MATERIALS

The contractor will remove miscellaneous materials from the press room, boiler room, and compressor room that have been identified during the initial walk-through with ERM as visually contaminated with oil or likely to have been contaminated due to location or proximity to hydraulic equipment. Oversized equipment and materials will be cut to size to maximize the amount of material that can fit in a roll-off bin. Materials to be removed may include, but are not limited to the following:

- Drained/emptied poly totes in the boiler room
- Portable pumps
- Metal and wooden employee work platforms
- Metal shelving in the press room

- Spill pallets used for drum and tote storage
- Buckets and plastic totes used for holding oily absorbent materials

4.7 DRAIN OIL FROM EQUIPMENT

The contractor will drain the hydraulic presses, piping, reservoirs, and pumps of free-flowing oil. If a drain plug or fitting does not allow for sufficient draining, the contractor may be required to use a portable pump to drain free-flowing liquid to prevent spills during transport to the disposal facility. The oil will be collected in drums provided by the contractor.

The contractor will also drain liquid from the oil/water separator and auxiliary equipment located in the compressor room and place it into drums.

4.8 EQUIPMENT DISASSEMBLY AND DISPOSAL

After draining, the hydraulic press and oil/water separator equipment will be disassembled and, if necessary, cut into manageable sizes for disposal. The hydraulic presses will be loaded onto flatbed trucks provided by ERM for transport to a disposal facility. The piping, reservoirs, oil collection pans, oil/water separator equipment, and other auxiliary equipment will be loaded by the contractor into roll-off bins.

Equipment disassembly and cutting/sizing shall be conducted using plastic sheeting or absorbent materials to collect and contain residual oils that may drain out during these activities. Equipment movement across the parking lot or other uncontaminated areas shall be done in a manner to prevent drips and leaks from contaminating previously clean areas.

It is expected that the Contractor will make use of appropriate scaffolding, man lifts, cranes or other equipment to dismantle the pipes in accordance with applicable worker protection regulations. The Contractor will be required to assure safe conditions throughout the work.

4.9 CLEAN CONCRETE FLOOR

The Contractor shall provide labor, equipment and materials to clean the concrete surfaces where the concrete has been stained to assure removal of the hydrocarbon stain and PCBs greater than one ppm. The Contractor

may use approved detergents and solvents. He may use manual tools (e.g., brushes, etc.), pressure washers, or other approved equipment to complete the work. The Contractor shall provide a description of the proposed methods, chemicals and detergents, and equipment he proposes to use to complete this work. Following the cleaning, ERM will collect verification samples per Section 7.0. If verification sample results identify areas of flooring where PCB levels slightly exceed cleanup goals, additional cleaning of all or select portions of the concrete floor may be required. If PCB levels in verification samples are significantly higher than the cleanup standard, removal of concrete may be required. Depending on the depth of PCB contamination and the ease of removal, surface removal methods may be utilized or the entire slab may be removed. The contractor will not be required to restore the concrete floor to its original grade following removal, as this will be done by Burly Seal.

If required, the contractor shall remove concrete using mechanical and/or hand operated equipment (e.g., scarifier or jack-hammer, etc.). The concrete waste shall be placed in roll-off bins by the Contractor for off-site transportation and disposal.

4.10 REMOVE PORTIONS OF CONCRETE FLOOR/UNDERLYING SOIL

The Contractor shall provide labor, equipment and materials to remove concrete to a width of two feet (one foot on each side of the seam) along approximately 70 feet of the slab seams in the press room. Approximately 30 feet of the seam that runs roughly north-south, perpendicular from the south wall behind the presses towards the center of the room will be removed, beginning from the wall behind the presses. Approximately 40 feet of the seam that runs roughly east-west, parallel to the south (back) wall will be removed; 20 feet on each side of where it intersects with the north-south running seam. Approximate concrete removal areas are shown on Figure 4. The concrete slab is approximately seven inches thick. The removed concrete will be visually inspected for indications that oil has migrated through the full thickness of concrete, and underlying soil will be inspected for signs of oil contamination. Soil that is suspected of being PCB-impacted will be removed using a small backhoe or hand tools. Removed concrete and soil will be placed by the contractor into an ERM-provided roll-off bin for disposal.

Following the removal, ERM will collect verification samples per Section 7.0. If verification sample results identify soil with PCB levels exceeding the cleanup goals, additional soil removal may be required.

4.11 REMOVAL OF WALL SURFACES

The Contractor will remove the acoustical foam material in the boiler room behind the hydraulic reservoirs. The foam layer is approximately one inch thick and is easily removable by hand. The material covers approximately 280 square feet of wall surface. The Contractor will place the material in a roll-off bin for disposal, paying particular attention to minimizing the volume by compressing the foam and/or placing heavier materials on top of the foam.

The Contractor will also remove an approximately five-square-foot section of damaged drywall in the press room in the vicinity of ERM's sample PW6. The drywall will be removed and placed in an ERM-provided roll-off bin for disposal.

4.12 VERIFICATION SAMPLING

ERM will perform verification sampling for the MP Environmental roll-off bin, the concrete floor, and soil to verify that the cleanup standards for unrestricted use have been achieved. The verification sampling plan is described in Section 7.0. If verification samples indicate that PCB contamination remains over the cleanup standard, the contractor will reclean the area or remove concrete or soil, and additional verification sampling will be conducted by ERM.

4.13 WASTE DISPOSAL

ERM will contract directly with an approved transportation and disposal contractor and will provide roll-off bins and flatbed trucks for waste disposal. The cleanup contractor will provide drums for disposal of liquid wastes generated, including oil, oily water, and cleanup solvents.

The cleanup contractor will conduct the following on-site waste management activities:

- Appropriately drum and label liquid wastes and place them onto transport vehicles provided by ERM's transportation and disposal contractor.

- Place solid waste materials, with the exception of hydraulic presses, into roll-off bins provided by ERM's transportation and disposal contractor. Management of solid waste materials will include

cutting large or bulky equipment, such as piping or shelving, into pieces to minimize the volume taken up in roll-off bins.

- Placing drained hydraulic presses onto flatbed trucks provided by ERM's transportation and disposal contractor.

4.14 CLEANUP AND DEMOBILIZATION

Following completion of the cleanup work, the contractor will remove all equipment, tools, and waste materials from the site and leave the site in a clean condition.

In the event that concrete scarification or removal is required to achieve the cleanup goal of one ppm, Burly Seal will perform all concrete repairs; this will not be the contractors responsibility provided ERM and the contractor agree on the need to remove the concrete.

5.0 LIST OF SUBMITTALS

Following the notice of award, the contractor will be required to submit the following documents prior to being authorized to proceed with the project:

- Site-specific health and safety plan (HASP).
- Work zone layout.
- Copies of Employee Training Certificates And Medical Surveillance Clearances (for each employee participating in on-site activities).
- List of hazardous materials to be used on site, such as detergents and solvents, and Material Safety Data Sheets (MSDS).
- Certificate of insurance, naming ERM as additional insured.
- Signed subcontract agreement between ERM and Contractor.

6.0 WASTE TRANSPORTATION AND DISPOSAL

The Contractor will prepare all demolition waste materials for proper transportation and disposal by placing them in approved containers (e.g., roll-off bins or flatbed trucks provided by ERM or by ERM's transportation and disposal contractor, or drums provided by the cleanup contractor). ERM will coordinate the transportation and disposal of waste materials through a Burly Seal-approved transportation and disposal contractor. The Contractor will not be responsible for waste transportation or disposal as part of this work; however, the Contractor will be required to load materials for disposal in a manner to minimize the number of roll-off bins needed.

Liquid wastes generated during the cleanup, such as oil, oily water, and cleanup solvents, will be sent off site for disposal at Clean Harbors' Aragonite incinerator.

Solid wastes generated during the cleanup, such as PCB hydraulic pumps, presses, pipes, other PCB equipment, porous and non-porous materials, bulk PCB remediation wastes, non-liquid cleanup wastes, will be sent off-site for disposal at Clean Harbors' Grassy Mountain TSCA-approved PCB landfill.

Both the Aragonite and Grassy Mountain facilities are TSCA-approved PCB disposal facilities. Because waste will not be shipped to a facility that is not subject to a TSCA PCB disposal approval, the 15-day notice requirements of 40 CFR 761.61(a)(5)(B)(2)(iv) are not applicable.

PCB wastes will be packaged and shipped pursuant to DOT requirements.

Burly Seal is the generator of the waste and will sign hazardous waste manifests. Because Burly Seal does not own or operate PCB storage facilities subject to the storage requirements of 40 CFR 761.65(b) or (c)(7), Burly Seal is not required to notify EPA and receive an EPA ID number. Burly Seal will use the generic identification number "40 CFR PART 761" on manifests, as allowed under 40 CFR 761.202(c)(1).

The following wastes are not required to be accompanied by a hazardous waste manifest:

- Non-liquid cleanup waste
- Bulk PCB remediation waste with a concentration less than 50 ppm PCBs

- Materials decontaminated in accordance with 40 CFR 761.79

The following wastes will be shipped under a uniform hazardous waste manifest:

- PCB remediation wastes with a concentration ≥50 ppm PCBs,

- Other PCB wastes that have not been decontaminated in accordance with 40 CFR 761.79.

Hazardous waste manifests will be maintained at the facility for a period of at least three years.

7.0 VERIFICATION SAMPLING

Verification sampling will be performed by ERM for the concrete floor and the interior surface of the MP Environmental roll-off bin (the surface that was in contact with PCB-contaminated material) to verify that cleanup goals have been achieved. If non-porous wall surfaces are cleaned based on visual evidence of oil staining or characterization samples showing PCB contamination, the cleaned surfaces will be subject to verification sampling using the same procedure as that listed below for the MP Environmental roll-off bin.

7.1 CONCRETE FLOOR VERIFICATION SAMPLING

Following cleaning of the concrete floor, ERM will conduct verification sampling in accordance with 40 CFR 761 Subpart O, which defines sampling requirements to verify completion of self-implementing cleanup for porous surfaces.

7.1.1 Sample Locations

The Subpart O protocol calls for using a grid based system on a general north-south axis to overlay the entire area to be sampled. The press room proposed sample locations are shown on Figure 5 and the boiler room proposed sample locations are shown on Figure 6. The sample locations have been arranged in a (roughly) north-south oriented, 1.5-meter, square-based grid overlaying the expected cleanup area.

The expected cleanup area in the press room is approximately 30 meters by 11 meters. Therefore, a total of approximately 140 to 160 grid points would require sampling. For the boiler room, the expected cleanup area is approximately 25 meters by 6 meters. Therefore, a total of approximately 60 to 70 grid points would require sampling. Additional samples may be required based on the actual extent of the cleanup. One sample is expected to be collected at each location (to a depth of 7.5 cm) for compositing by geographic area as shown in the figures.

7.1.2 Sampling and Analysis Methods

Samples will be collected using a rotary hammer or drill with an approximately two inch bit to collect concrete to a maximum depth of 7.5 cm. Clean sampling tools will be used to collect each sample, and proper decontamination methods will be observed between successive sampling locations.

The concrete from each location will be composited in the field based on selected proximal sample locations to be grouped into representative composite samples (not exceeding nine sample locations). The composite samples will be prepared using equal volumes of each individual sample, which will be placed into a clean bowl or disposable plastic bag, and mixed thoroughly prior to placement into the laboratory-provided sample containers.

All samples will be analyzed for PCBs using EPA Method 8082.

7.1.3 Resampling

If portions of the concrete floor are recleaned based on the results of the initial cleanup verification sample, the procedure described above shall be used to set up a new verification sampling grid for areas that have been recleaned. However, instead of setting up the sampling grid in the same location, the grid axes established previously will be reoriented by moving the origin one meter in the direction of magnetic north and one meter in the direction east of magnetic north.

7.2 SOIL VERIFICATION SAMPLING

Following removal of soil beneath the slab seams, ERM will conduct verification sampling in general accordance with 40 CFR 761 Subpart O, which defines sampling requirements to verify completion of self-implementing cleanup for porous surfaces.

7.2.1 Sample Locations

The Subpart O protocol calls for using a grid based system on a general north-south axis to overlay the entire area to be sampled. However, the area to be sampled is two perpendicular linear trenches that are each 0.6 meters (2-feet) wide, and the trenches are not on a direct north-south axis. Therefore, a 1.5-meter grid overlaying the area may result in only a few sample points falling within the removal area. In order to ensure sufficient samples will be collected, a 1.5-meter grid will be established along the axes of the seams and concrete cuts, with the grid origin at the intersection of the two trench cuts. The soil removal area consists of two intersecting lines/trenches, each 0.6 meters wide. The trench perpendicular to the back wall will be 9.1 meters (six 1.5 meter grid points), and the trench parallel to the back wall will be 12.2 meters (eight 1.5 meter grid points). Along each axis, up to three adjacent samples will be composited together.

7.2.2 Sampling and Analysis Methods

Samples will be collected using a bucket auger or a trowel to collect soil to a maximum depth of 7.5 cm. Clean sampling tools will be used to collect each composite sample, and proper decontamination methods will be observed between successive composite samples.

The soil from each location will be composited in the field based on selected proximal sample locations to be grouped into representative composite samples (not exceeding three sample locations). The composite samples will be prepared using equal volumes of each individual sample, which will be placed into a clean bowl or disposable plastic bag, and mixed thoroughly prior to placement into the laboratory-provided sample containers.

All samples will be analyzed for PCBs using EPA Method 8082.

7.2.3 Resampling

If additional concrete and/or soil is removed based on the results of the initial cleanup verification samples, the procedure described above shall be used to set up a new verification sampling grid for areas that have been removed. However, instead of setting up the sampling grid in the same location, new sample points will be established along the same axis but halfway between the original sample points.

7.3 ROLL-OFF BIN VERIFICATION SAMPLING

Following cleaning of the MP Environmental roll-off bin (and non-porous wall surfaces, if necessary), ERM will conduct verification sampling in accordance with 40 CFR 761 Subpart P, which defines sampling requirements for non-porous surfaces for use, reuse, or disposal under 40 CFR 761.61(a)(6) or decontamination under 40 CFR 761.79(b). As the roll-off bin will be returned to the vendor for reuse, the cleanup verification requirements of 40 CFR 761.61(a)(6) apply.

The exterior of the roll-off bin has not come into contact with PCBs. The interior of the roll-off bin will be cleaned, and following cleaning will be sampled per the requirements in 40 CFR 761 Subpart P for a large nearly flat surface.

7.3.1 Sample Locations

The Subpart P protocol involves dividing the surface into one meter squares and marking the grid so that it is clearly identified. Each grid square will be assigned a unique sequential number.

The MP Environmental roll-off bin has approximate dimensions of 16 feet long by four feet wide by nearly eight feet high. The floor of the bin is rounded, so the floor and sidewalls can be considered one continuous surface that is 20 feet long from the top of one wall, across the bottom, and back up to the top of the other wall. Therefore, the bin interior dimensions, excluding the end walls, are 16 feet (approximately 5 meters) by 20 feet (approximately 6 meters), or 30 square meters. The two ends of the roll-off bin each have a surface area of 32 square feet, or approximately 3 square meters. The total interior surface of the bin is approximately 36 square meters.

According to the sampling procedure in Subpart P, for large nearly flat surfaces that are contaminated by a single source of PCBs with uniform concentration, a random number generator or table should be used to select a minimum of 10% of the areas to sample, with a minimum of three samples. Therefore, a random number generator will be used to sample 4 of the uniquely numbered grid squares.

The location of the 100 square centimeter (cm^2) sample point within the one meter grid square will be chosen by random selection of halves. Because the one meter squares within the roll-off bin will be approximately the same shape and size, the same 100 cm^2 location within each grid square may be sampled (for example, if the random selection by halves method selects a point in the top right corner of the one meter grid square for sampling, the samples for each grid square may be taken from the top right corner). The procedure for selecting a sampling location by random selection of halves is as follows:

- Divide each 1 meter square portion where it is necessary to collect a surface wipe test sample into two equal (or as nearly equal as possible) halves. For example, divide the area into top and bottom halves or left and right halves. Choose the top/bottom or left/right division that produces halves having as close to the shape of a circle as possible. For example, a square is closer to the shape of a circle than is a rectangle and a rectangle having a length to width ratio of 2:1 is closer to the shape of a circle than a rectangle having a length to width ratio of 3:1.

- Assign a unique identifier to each half and then select one of the halves for further sampling with a random number generator or other device (i.e., by flipping a coin).

- Continue selecting progressively smaller halves by dividing the previously selected half until the final selected half is approximately equal to 100 cm^2.

- Perform a standard PCB wipe test on the final selected section, using a 10 cm by 10 cm square to achieve the 100 cm^2 sample.

If there are one meter grid squares that differ in shape from the remainder of the squares, such as on the end walls of the bin, the random selection of halves procedure will be used for each uniquely shaped grid component.

7.3.2 Sampling and Analysis Methods

The procedure for collecting a wipe sample, as described in the document Wipe Sampling and Double Wash/Rinse Cleanup as Recommended by the Environmental Protection Agency PCB Spill Cleanup Policy[i] is as follows:

1. Place 100 cm^2 template on surface to delineate area to be sampled. A 100 cm^2 template may be created by cutting a square with 10 cm sides from a piece of paper or cardboard, or by taping a square on the surface to be sampled with 10 cm sides on the interior of the taped square.

2. With gloved hands, remove gauze pad from its wrapper.

3. Wet pad with hexane (do not use solvent when surface to be sampled is visibly wet, simply blot liquid within measured area.)

4. Immediately begin applying the gauze using a gloved hand and, applying pressure, wipe the sample area completely twice, from left to right and then from top to bottom.

5. Let the gauze air dry.

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[i] Written by John H. Smith, Ph.D., Chief, PCB Disposal Section, Chemical Regulation Branch, U.S. EPA; dated June 23, 1987, Revised and Clarified on April 18, 1991.

6. Fold the dry gauze (sampled side inward) and return it to the sample jar.

7. Seal, label, and prepare jar for transport to the laboratory.

8. Prepare blanks and/or duplicate samples per the quality assurance procedures in Section 8.2.

The wipe samples will be analyzed for PCBs using EPA Method 8082.

8.0 STANDARD OPERATING PROCEDURES

The following procedures will be observed as appropriate during the cleanup activities and for confirmation sampling.

8.1 SAMPLE LABELING AND HANDLING

8.1.1 Sample Containers and Sample Volumes

Upon collection, each sample will be placed into pre-cleaned, laboratory supplied sample jars. The types of jars and sample volumes will be confirmed with the selected laboratory to perform chemical analyses.

8.1.2 Sample Identification and Documentation

After a sample has been collected, a water-proof label will be prepared and immediately affixed to each container. Sample labels will contain the following information: a unique sample identification number, date and time of sampling, constituents to be analyzed, and comments such as special handling instructions, if any. The specific sample identification will be provided for each sample location.

After collecting and labeling the samples, they will be placed in an insulated cooler with ice. The samples will remain in the cooler on ice during storage and shipment to the analytical laboratory.

8.1.3 Chain of Custody

Chain-of-Custody (COC) forms will be used to provide documentation of the handling of each sample from the time it is collected to the time it is discarded or archived by the analytical laboratory. The COC forms will include the project name and number, names of the field sampling personnel, the sample identification number, date and time the sample was collected, sample location, number of containers per sample number, constituents to be analyzed, and comments, if any. Additionally, the form will document the date, time, and signature of person(s) relinquishing and receiving custody of the samples. The COC form(s) for samples in each cooler will be sealed in lock-tight plastic bags and placed in the cooler.

8.1.4 Sample Delivery

All samples will be hand-delivered or shipped by courier to the certified laboratory. Courier bills will be used to document the transfer of samples

and the location of the samples while in the possession of the courier company.

8.1.5 Field Log Book and Records

During field activities, field log books will be utilized to create a record of site activities. These documents will be maintained in the project file. The field log book will be used to document daily activities and verification sample collection locations. Each page will include the current date, consecutive page number, and the author's initials. If a portion of a page is left blank, a line will be placed diagonally through the blank space and the author's initials written on the line. Daily entries into the log book will include items such as excavation activities, interim field screening results (if used), verification sample collection information, the personnel/companies on the site, weather conditions, chronological series of the day's events, visitors to the site, telephone conversation summaries, and deviations from the work plan. Field log book entries should be limited to factual information, and not the opinions or interpretations of the field personnel.

8.1.6 Laboratory Analytical Methods

All samples will be analyzed by the laboratory using the methods specified in Section 6.

8.1.7 Equipment Decontamination

All non-disposable sampling equipment will be decontaminated prior to use and between sample locations in accordance with standard decontamination operating procedures presented in Appendix C.

8.2 QUALITY ASSURANCE

Appropriate quality assurance protocol will be observed during verification sample collection and delivery to the laboratory. This will include collection of duplicate samples and equipment rinse blank samples for PCB analysis at a frequency of one per 10 samples submitted to the laboratory (10% duplication/confirmation).

8.3 HEALTH AND SAFETY

ERM's sampling and oversight work will be performed in accordance with ERM's Site-Specific Health and Safety Plan (HASP) for the site. A

copy of ERM's HASP is presented in Appendix D. The Contractor will be required to prepare his own project safety plan for review by Burly Seal and ERM prior to the start of work. The Contractor may use information presented in ERM's HASP to support development of his plan.

9.0 SCHEDULE

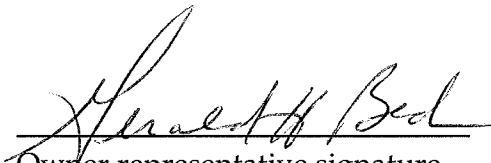
The proposed schedule for completion of the project is as follows. Some activities are listed with timeframes to be determined as a result of ongoing litigation relating to the project site. Burly Seal will continue to apprise the EPA of updates in scheduling.

- Friday, April 29 – Send bid package to contractors
- Friday, May 6 at 10:00am – Contractor bid walk at Burly Seal in Tooele
- Friday, May 20 – Bids due
- To be determined – Notice of Award
- Ten day period following Notice of Award – contractor submittal period and preparation of subcontract agreement
- To be determined – Notice to Proceed
- To be determined – Mobilize, begin work
- One month following beginning of work – Proposed demobilization, site work complete (may be done sooner, if contractors complete work prior to this date)

10.0 CERTIFICATION

As required by 40 CFR 761.61(a)(3)(E), all sampling plans, sample collection procedures, sample preparation procedures, extraction procedures, and instrumental/chemical analysis procedures used to assess or characterize the PCB contamination at the cleanup site, are kept on file at Burly Seal and are available for EPA inspection. In addition, characterization analytical results are included as Appendix A and Appendix B to this Work Plan.

Signature of owner representative:



Owner representative signature

05/16/11

Date

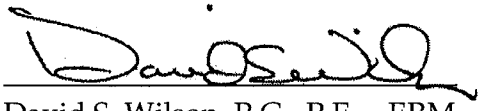
GERALD H. BECK

Printed Name

ENGINEERING MGR

Title

Signature of party conducting cleanup:

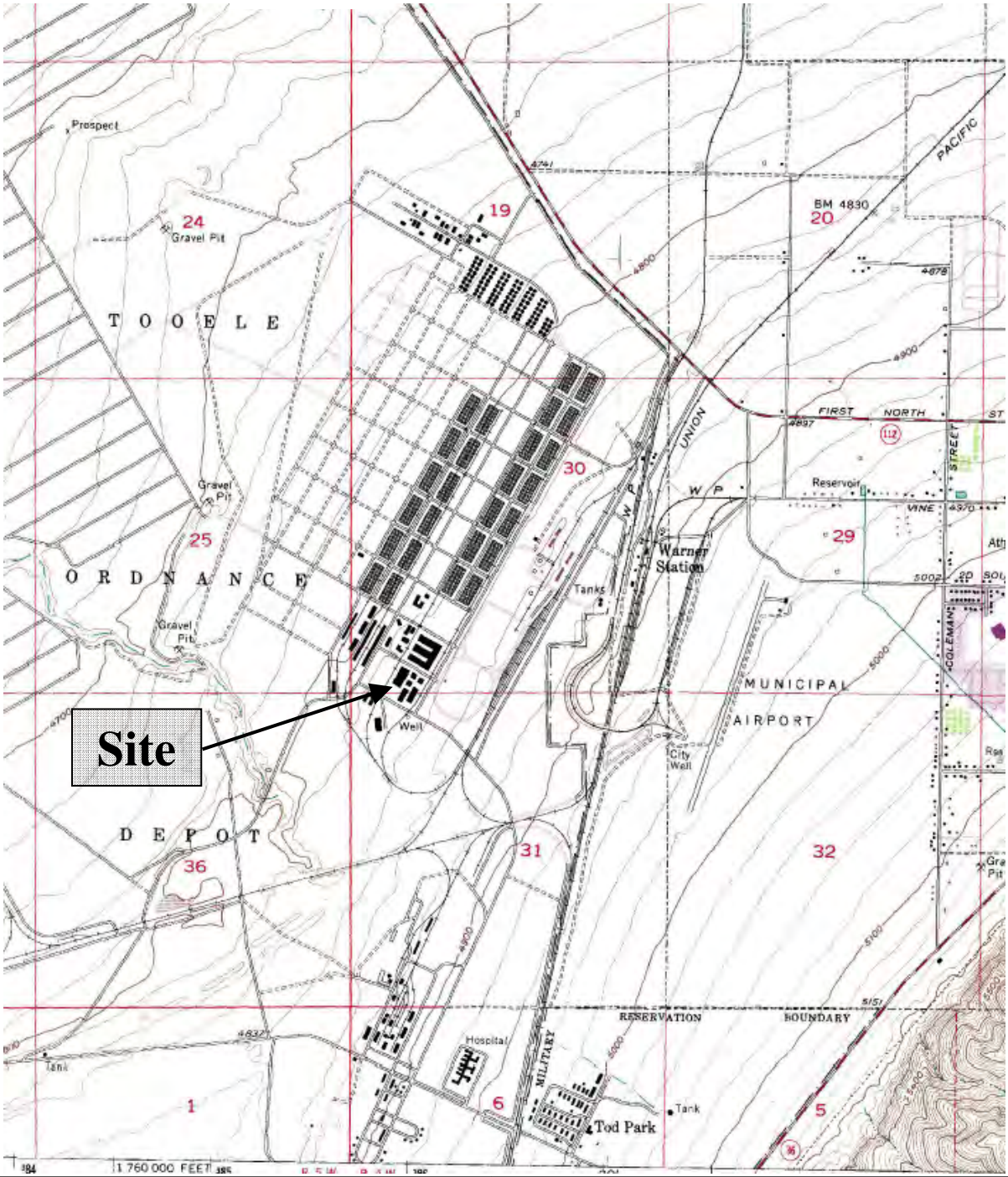


David S. Wilson, P.G., P.E. – ERM

5/16/11

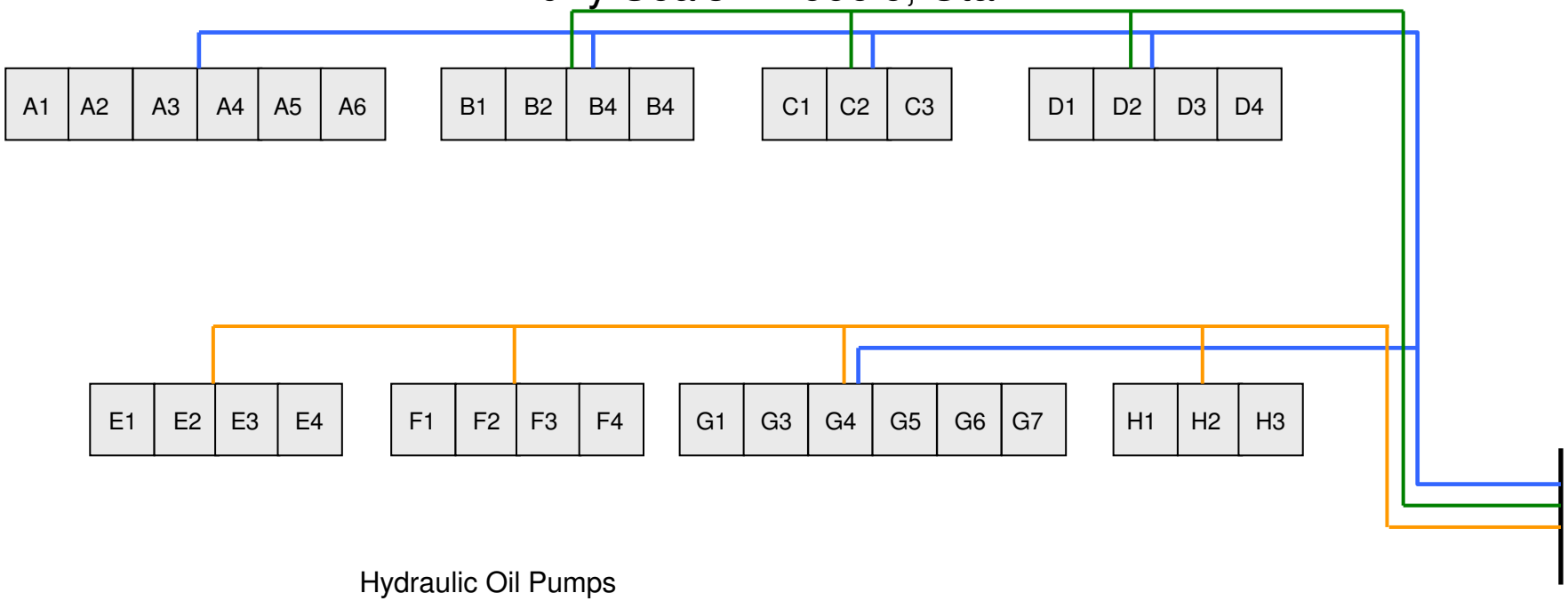
Date

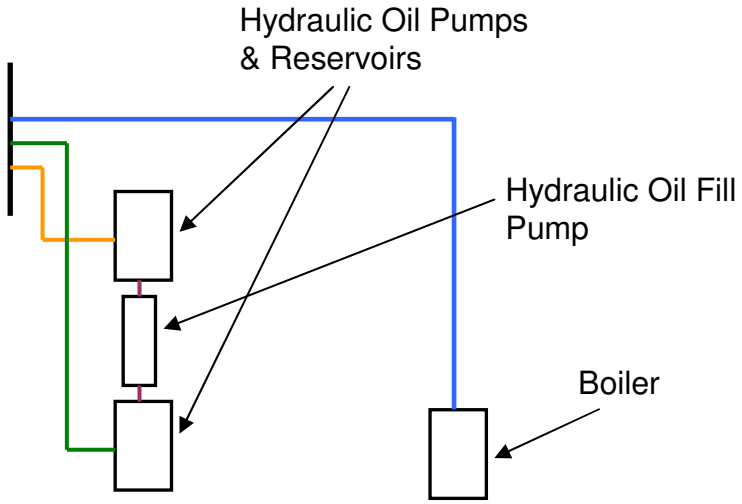
Figures



Source: USGS 1:24,000 Scale Topographic Map, Tooele Quadrangle	**Environmental Resources Management** 102 West 500 South, Suite 650 Salt Lake City, Utah 84102 801-595-8400	
Figure 1- Site Location Map **Burly Seal** **1865 West D Avenue, Building 604** **Tooele, Utah**	Drawn By: TRP Checked By: Date: 4/5/2011	Project No. 0129927

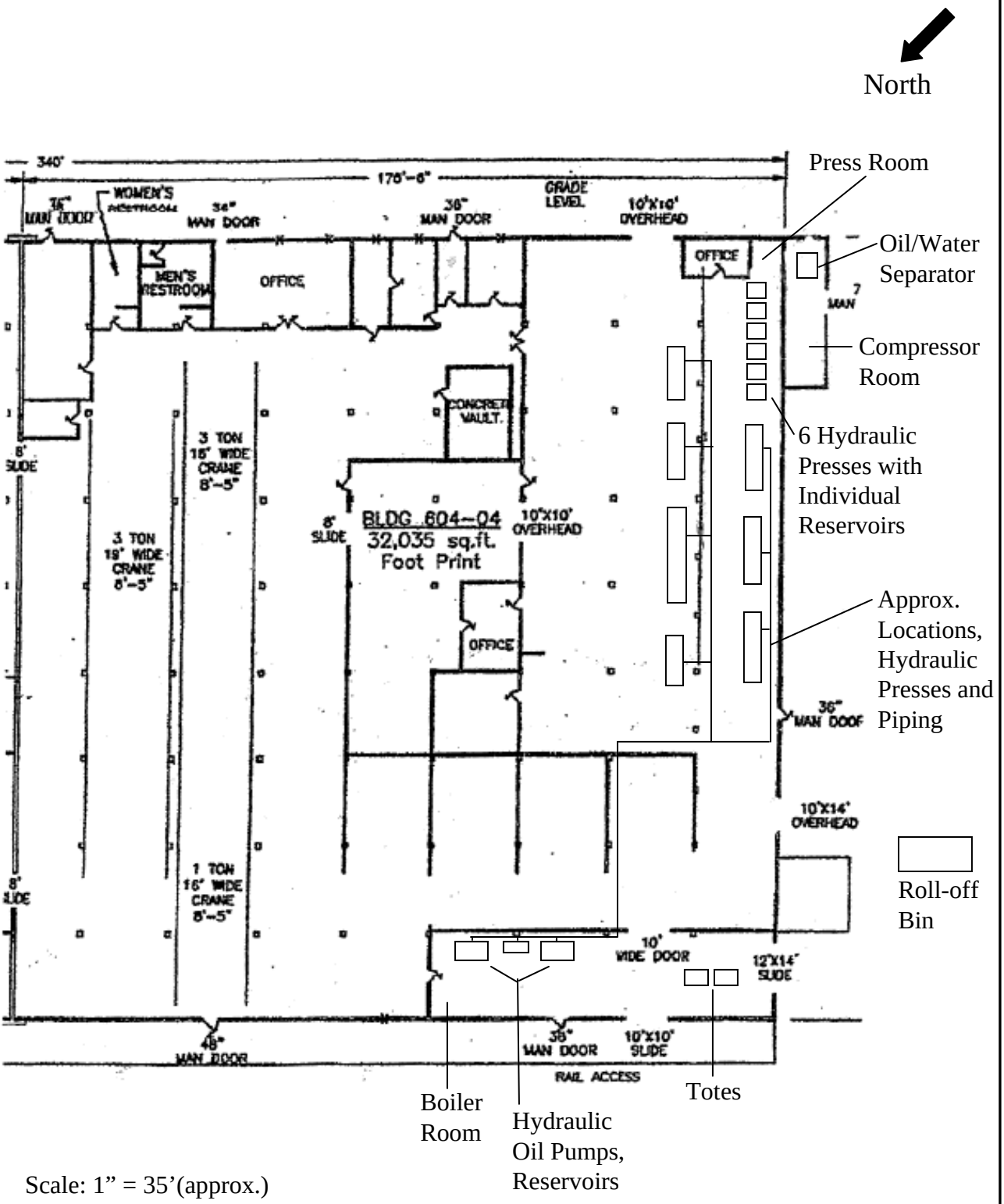
Figure 2
PROCESS FLOW DIAGRAM
HYDRAULIC PRESS OPERATIONS
Burly Seals – Tooele, Utah



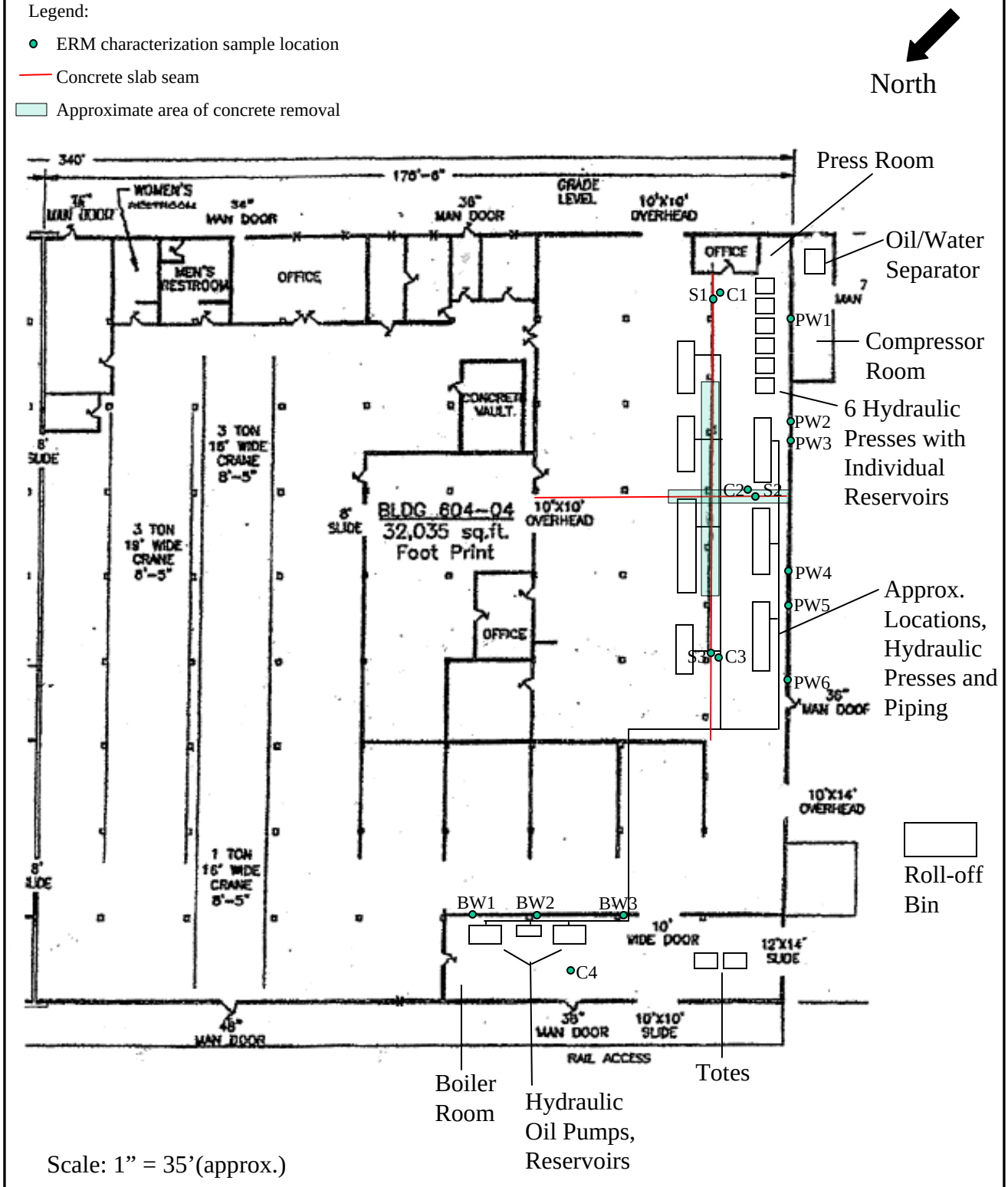


Legend

- Steam line (inlet & outlet)
- Hydraulic oil lines (high pressure supply, low pressure supply, & return)
- Hydraulic oil lines (high pressure supply, low pressure supply, & return)



Source: Burly Seal Provided Plot Plan (Reported to have come from UID)	**Environmental Resources Management** 102 West 500 South, Suite 650 Salt Lake City, Utah 84102 801-595-8400	
Figure 3- PCB Contaminated Equipment and Material Locations **Burly Seal – 1865 West D Avenue, Building 604** **Tooele, Utah**	Drawn By: TRP Checked By: Date: 4/5/2011	Project No. 0129927



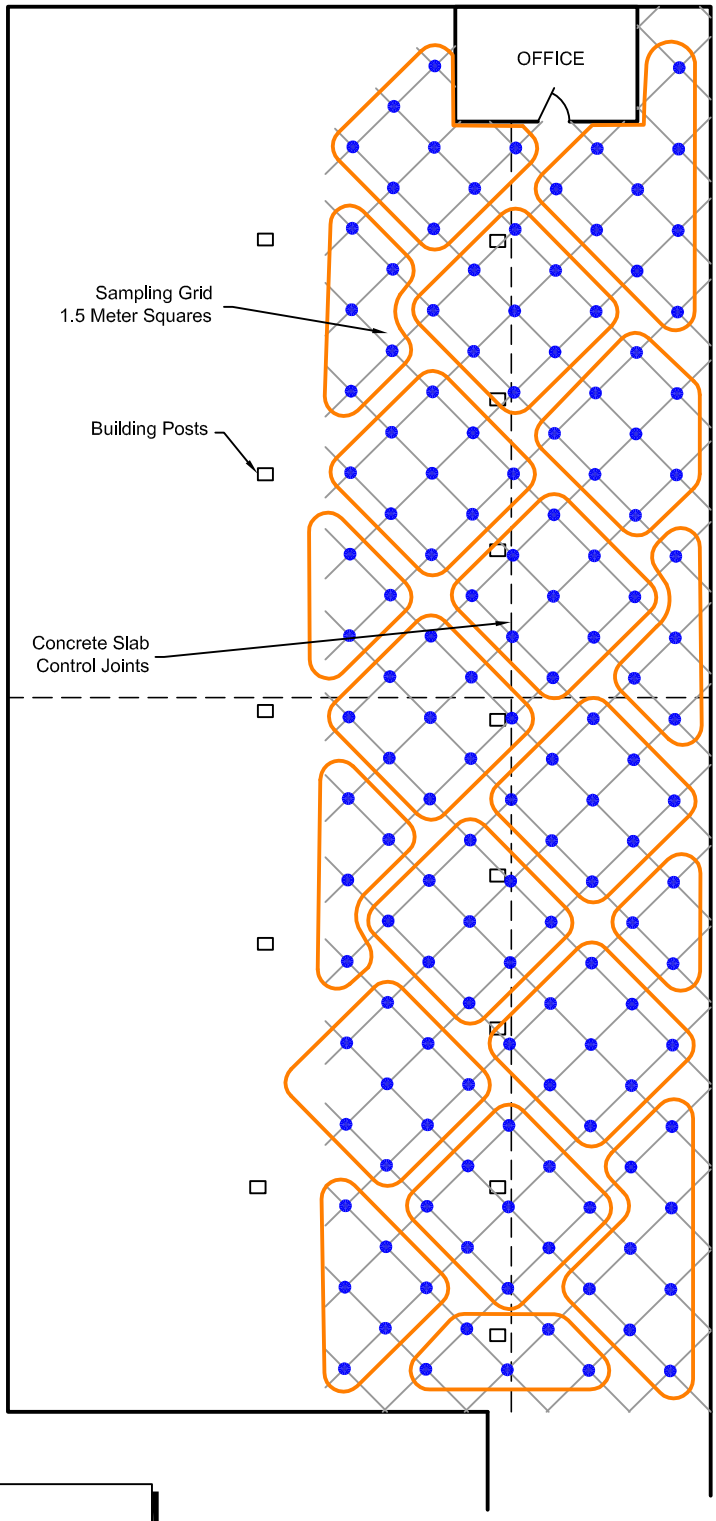
Source: Burly Seal Provided Plot Plan (Reported to have come from UID)	**Environmental Resources Management** 102 West 500 South, Suite 650 Salt Lake City, Utah 84102 801-595-8400
Figure 4- ERM Characterization Sample Locations **Burly Seal – 1865 West D Avenue, Building 604** **Tooele, Utah**	Drawn By: TRP Checked By: Date: 4/28/2011 Project No. 0129927

Project No. 0129927.00

Date: 04/28/11

Drawn By: J. Estrada

CAD File: g:\\0129927\012992700-01.dwg



LEGEND

Individual Sample Points

Composite Sample Groupings

0 5

Approx. Scale (Meters)

Figure 5

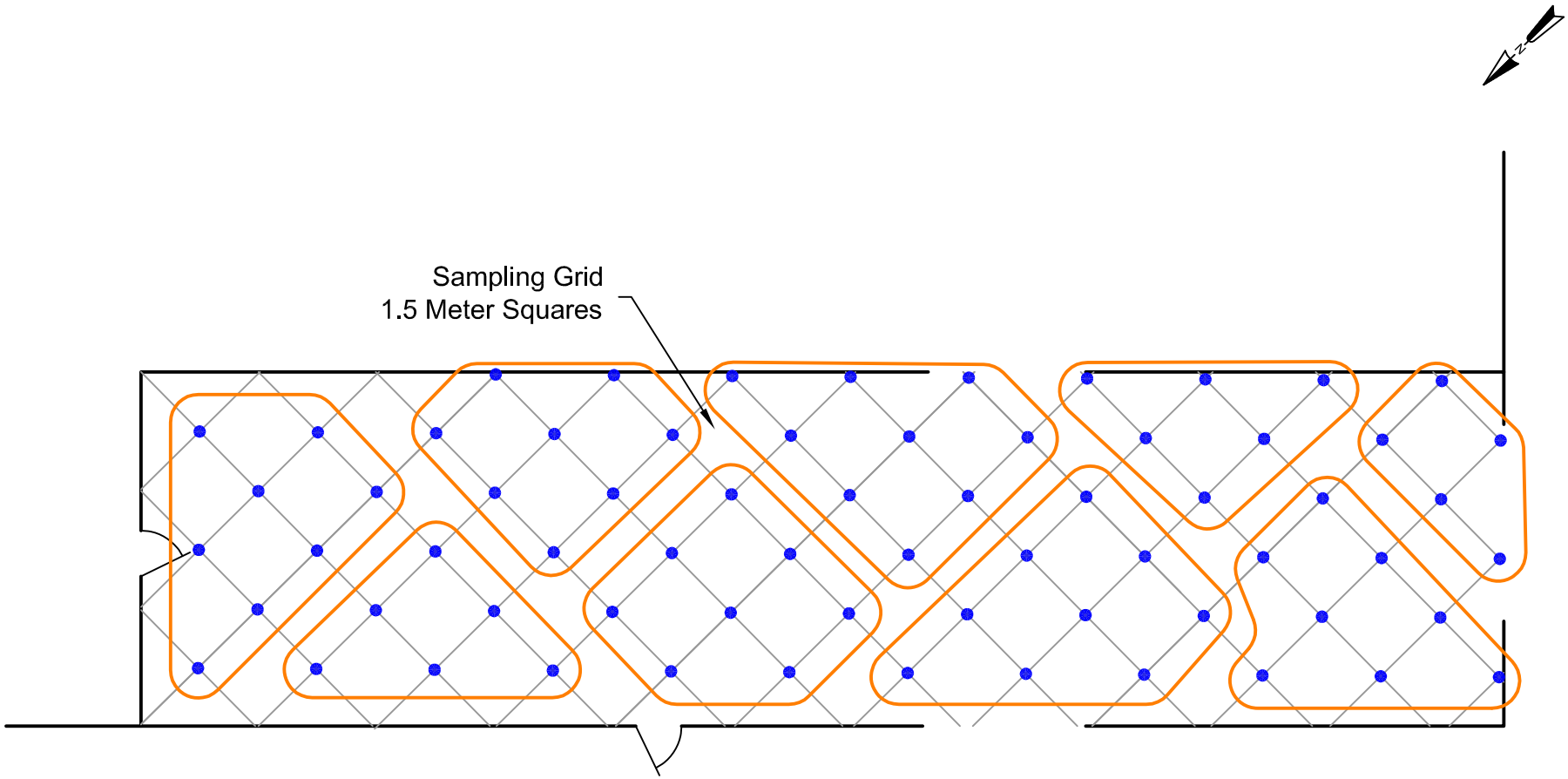
Proposed Verification Sampling Locations - Press Room

Burly Seal - 1865 West D Avenue, Building 604

Tooele, Utan

ERM 04/11

CAD File:	Drawn By:	Date:	Project No.
g:\\0129927\012992700-01.dwg	J. Estrada	04/28/11	0129927.00



LEGEND
Individual Sample Points
Composite Sample Groupings

0 3
Approx. Scale (Meters)

Figure 6
Proposed Verification Sampling Locations - Boiler Room
Burly Seal - 1865 West D Avenue, Building 604
Tooele, Utah

ERM 04/11

Appendix A

Laboratory Results – Historical

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
Salt Lake City, UT
84115

(801) 263-8686
Toll Free (888) 263-8686
Fax (801)263-8687
email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Becky Holubek
Utility Testing Laboratory
1615 W. 2200 So., # A
SLC, UT 84119-
TEL: (801) 485-8941
FAX (801) 467-0065

RE:

Lab Setl D: 1003203

Dear Becky Holubek:

American West Analytical Laboratories received 5 sample(s) on 3/10/2010 for the analyses presented in the following report.

All analyses were performed in accordance to The NELAC Institute protocols unless noted otherwise. American WestA nalytical Laboratories is certified by The NELAC Institute in the following states: Utah, Colorado, Idaho,a nd Texas. Certification document is available upon request. If you have any questions or concerns regarding this report please feel free to call.

The abbreviation "Surr" found in organic reports indicates a surrogate compound thati s intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitaion limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit.

Thank You,

Approved by: Jose G. Rocha

Digitally signed by Jose G. Rocha
DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou=QAO, email=jose@awal-labs.com, c=US
Date: 2010.03.11 16:14:35 -07'00'

Laboratory Director or designee

ORGANIC ANALYTICAL REPORT

AMERICAN
WEST
ANALYTICAL
LABORATORIES

463 West 3600 South
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email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Client: Utility Testing Laboratory **Contact:** Becky Holubek
Project:
Lab Sample ID: 1003203-001A
Client Sample ID: 1 /3-1 0-10-01
Collection Date: 3/10/2010 11:08:00 AM **Analyzed:** 3/11/2010 8:15:14 AM
Received Date: 3/10/2010 **Extracted:** 3/10/2010 3:50:03 PM
Method Used: SW8082A

AnalyticalR esults PCBs by GC/ECD Method 8082A/3545A

Units: µg/kg-dry
Dilution Factor: 10

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	650	< 650	[2]
Aroclor 1221	11104-28-2	650	< 650	
Aroclor 1232	11141-16-5	650	< 650	
Aroclor 1242	53469-21-9	650	< 650	
Aroclor 1248	12672-29-6	3,300	**40,000**	D
Aroclor 1254	11097-69-1	650	< 650	
Aroclor 1260	11096-82-5	650	< 650	[2]
Surr: Decachlorobiphenyl	2051-24-3	10-180	**37.4**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**125**	

D - This analyte was obtained from a 1:50 dilution.
[2] - Analyte concentration(1248) is too high for accurate matrix spike recovery and/or RPD.
Sulfuric acid cleanup method 3665A utilized for this sample.

ORGANIC ANALYTICAL REPORT

Client: Utility Testing Laboratory **Contact:** Becky Holubek
Project:
Lab Sample ID: 1003203-002A
Client Sample ID: 3 /3-1 0-10-02
Collection Date: 3/10/2010 11:15:00 AM **Analyzed:** 3/10/2010 8:24:43 PM
Received Date: 3/10/2010 **Extracted:** 3/10/2010 3:49:03 PM
Method Used: SW8082A

AnalyticalR esults PCBs by GC/ECD Method 8082A/3580A

Units: mg/kg
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	1,000	< 1,000	~
Aroclor 1221	11104-28-2	10	< 10	
Aroclor 1232	11141-16-5	10	< 10	
Aroclor 1242	53469-21-9	10	< 10	
Aroclor 1248	12672-29-6	2,000	**73,000**	D
Aroclor 1254	11097-69-1	10	< 10	
Aroclor 1260	11096-82-5	1,000	< 1,000	~
Surr: Decachlorobiphenyl	2051-24-3	10-423	**131**	
Surr: Tetrachloro-m-xylene	877-09-8	10-133	**110**	

D - This analyte was obtained from a 1:200 dilution.
~ - The reporting limits were raised due to high analyte concentrations.
Sulfuric acid cleanup method 3665A utilized for this sample.

AMERICAN WEST ANALYTICAL LABORATORIES

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email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Utility Testing Laboratory **Contact:** Becky Holubek
Project:
Lab Sample ID: 1003203-003A
Client Sample ID: 5 /3-1 0-10-03
Collection Date: 3/10/2010 11:31:00 AM **Analyzed:** 3/10/2010 9:30:32 PM
Received Date: 3/10/2010 **Extracted:** 3/10/2010 3:49:03 PM
Method Used: SW8082A

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

AnalyticalR esults PCBs by GC/ECD Method 8082A/3580A

Units: mg/kg
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	5.0	< 5.0	~
Aroclor 1221	11104-28-2	1.0	< 1.0	
Aroclor 1232	11141-16-5	1.0	< 1.0	
Aroclor 1242	53469-21-9	1.0	< 1.0	
Aroclor 1248	12672-29-6	10	**380**	D
Aroclor 1254	11097-69-1	1.0	< 1.0	
Aroclor 1260	11096-82-5	5.0	< 5.0	~
Surr: Decachlorobiphenyl	2051-24-3	10-423	**102**	
Surr: Tetrachloro-m-xylene	877-09-8	10-133	**91.2**	

D - This analyte was obtained from a 1:10 dilution.
~ - The reporting limits were raised due to high analyte concentrations.
Sulfuric acid cleanup method 3665A utilized for this sample.

ORGANIC ANALYTICAL REPORT

Client: Utility Testing Laboratory **Contact:** Becky Holubek
Project:
Lab Sample ID: 1003203-004A
Client Sample ID: 6 /3-1 0-10-04
Collection Date: 3/10/2010 12:40:00 PM **Analyzed:** 3/10/2010 11:42:22 PM
Received Date: 3/10/2010 **Extracted:** 3/10/2010 3:49:03 PM
Method Used: SW8082A

AMERICAN WEST ANALYTICAL LABORATORIES

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Analytical Results PCBs by GC/ECD Method 8082A/3580A

Units: mg/kg
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	5.0	< 5.0	~
Aroclor 1221	11104-28-2	1.0	< 1.0	
Aroclor 1232	11141-16-5	1.0	< 1.0	
Aroclor 1242	53469-21-9	1.0	< 1.0	
Aroclor 1248	12672-29-6	5.0	**140**	D
Aroclor 1254	11097-69-1	1.0	< 1.0	
Aroclor 1260	11096-82-5	5.0	< 5.0	~
Surr: Decachlorobiphenyl	2051-24-3	10-423	**102**	
Surr: Tetrachloro-m-xylene	877-09-8	10-133	**85.6**	

D - This analyte was obtained from a 1:5 dilution.
~ - The reporting limits were raised due to high analyte concentrations.
Sulfuric acid cleanup method 3665A utilized for this sample.

ORGANIC ANALYTICAL REPORT

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email: awal@awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Client: Utility Testing Laboratory **Contact:** Becky Holubek
Project:
Lab Sample ID: 1003203-005A
Client Sample ID: 7 /3-1 0-10-05
Collection Date: 3/10/2010 12:45:00 PM **Analyzed:** 3/11/2010 12:48:28 AM
Received Date: 3/10/2010 **Extracted:** 3/10/2010 3:49:03 PM
Method Used: SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3580A

Units: mg/kg
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	5.0	< 5.0	~²
Aroclor 1221	11104-28-2	1.0	< 1.0	
Aroclor 1232	11141-16-5	1.0	< 1.0	
Aroclor 1242	53469-21-9	1.0	< 1.0	
Aroclor 1248	12672-29-6	10	**230**	D
Aroclor 1254	11097-69-1	1.0	< 1.0	
Aroclor 1260	11096-82-5	5.0	< 5.0	~²
Surr: Decachlorobiphenyl	2051-24-3	10-423	**107**	
Surr: Tetrachloro-m-xylene	877-09-8	10-133	**88.0**	

D - This analyte was obtained from a 1:10 dilution.
² - Analyte concentration(1248) is too high for accurate matrix spike recovery and/or RPD.
~ - The reporting limits were raised due to high analyte concentrations.
Sulfuric acid cleanup method 3665A utilized for this sample.

RUSH

American West Analytical Laboratories

WORK ORDER Summary

10-Mar-10

Work Order: 1003203

WO Type: Standard

Client ID:	UTI100	**Contact:**	Becky Holubek
Project ID:		**PM:**	
Project:		**QC Level:**	LEVEL I
ChkList Completed On:		**Completed By**	
ChkList Reviewed On:		**Reviewed By:**	
WO Reviewed On:		**Reviewed By:**	AKSD

COMMENTS :

Next Day Rush; No Hard Copies. Client needs results ASAP. Analysis will be used in court.;

DB

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1003203-001A	1 / 3-10-10-01	3/10/2010 11:08:00 AM	3/10/2010 3:13:54 PM	3/11/2010	Soil	3545A-PCBS-PR	☐	☐	☐	☐	hall - pcb
				3/11/2010		8082-S	☐	☐	☑	☐	hall - pcb
				3/11/2010		PMOIST	☐	☐	☐	☐	hall - pcb
1003203-002A	3 / 3-10-10-02	3/10/2010 11:15:00 AM		3/11/2010	Oil	3580-WASTE-O	☐	☐	☐	☐	hall - pcb
				3/11/2010		8082-O	☐	☐	☑	☐	hall - pcb
1003203-003A	5 / 3-10-10-03	3/10/2010 11:31:00 AM		3/11/2010		3580-WASTE-O	☐	☐	☐	☐	hall - pcb
				3/11/2010		8082-O	☐	☐	☑	☐	hall - pcb
1003203-004A	6 / 3-10-10-04	3/10/2010 12:40:00 PM		3/11/2010		3580-WASTE-O	☐	☐	☐	☐	hall - pcb
				3/11/2010		8082-O	☐	☐	☑	☐	hall - pcb
1003203-005A	7 / 3-10-10-05	3/10/2010 12:45:00 PM		3/11/2010		3580-WASTE-O	☐	☐	☐	☐	hall - pcb
				3/11/2010		8082-O	☐	☐	☑	☐	hall - pcb

1003203

Utility Testing Laboratory

SAMPLE RECORD/ ANALYSIS REQUEST

1615 W. 2200 S. Suite A Salt Lake City, Utah 84119 **Phone: 801-485-8941** **FAX: 801-467-0065**

Project Number:		Project Name:	Analysis								Report To (print): Becky Holubek		
P.O. Number:		Sampler's Signature:	PCB								No. of cont.	Matrix	REMARKS
Date Sampled	**Sample Time**	**Sample Identification**											
3-10-10	11:08	1 3-10-10-01	X								1	Soil	
"	11:15	3 3-10-10-02	X								1	"	~ 10,000ppm 24 hr. Rush
"	11:31	5 3-10-10-03	X								1	"	
"	12:40	6 3-10-10-04	X								1	"	
"	12:45	7 3-10-10-05	X								1	"	

Relinquished (signature):	Date/Time:	Received (signature)	SEND RESULTS TO (Company Name)	CONDITION OF SAMPLES
Becky Holubek	3/10/10 15:04	Denise Brown	Utility Testing Laboratory	Samples Chilled: ☐ Yes ☐ No
Relinquished (signature):	Date/Time:	Received (signature)	To the attention of: Becky Holubek (becky@ut-labs.com)	Seals Intact: ☐ Yes ☐ No
Relinquished (signature):	Date/Time:	Received (signature)	Address: 1615 W. 2000 S. Suite A	Samples Preserved: ☐ Yes ☐ No
Relinquished (signature):	Date/Time:	Received (signature)	Salt Lake City, Utah 84119	Remarks:
			Phone: (801) 485-8941	
COMMENTS:			Fax: (801) 467-0065	

Lab Set ID: 1003203 DB

Samples Were:	COC Tape Was:	Container Type:	No. Rec.
☐ Shipped By:	**Present on Outer Package**	☐ AWAL Supplied Plastic	
☑ Hand Delivered	☐ Yes ☐ No ☐ N/A	☐ AWAL Supplied Clear Glass	
☐ Ambient	**Unbroken on Outer package**	☐ AWAL Supplied Amber Glass	
☑ Chilled	☐ Yes ☐ No ☑ N/A	☐ AWAL Supplied VOA/TOC/TOX Vials	
Temperature 19 °C	**Present on Sample**	☐ Amber ☐ Clear ☐ Headspace ☐ No Headspace	
Rec. Broken/Leaking ☐ Yes ☑ No ☐ N/A	☐ Yes ☑ No ☐ N/A	☐ Non AWAL Supplied Container	
Notes:	**Unbroken on Sample**	**Notes:**	
Properly Preserved ☑ Yes ☐ No ☐ N/A	☐ Yes ☐ No ☑ N/A		
Notes:	**Notes:**		
Rec. Within Hold ☑ Yes ☐ No		**Discrepancies Between Labels and COC** ☐ Yes ☑ No	
Notes:		**Notes:**	

DB

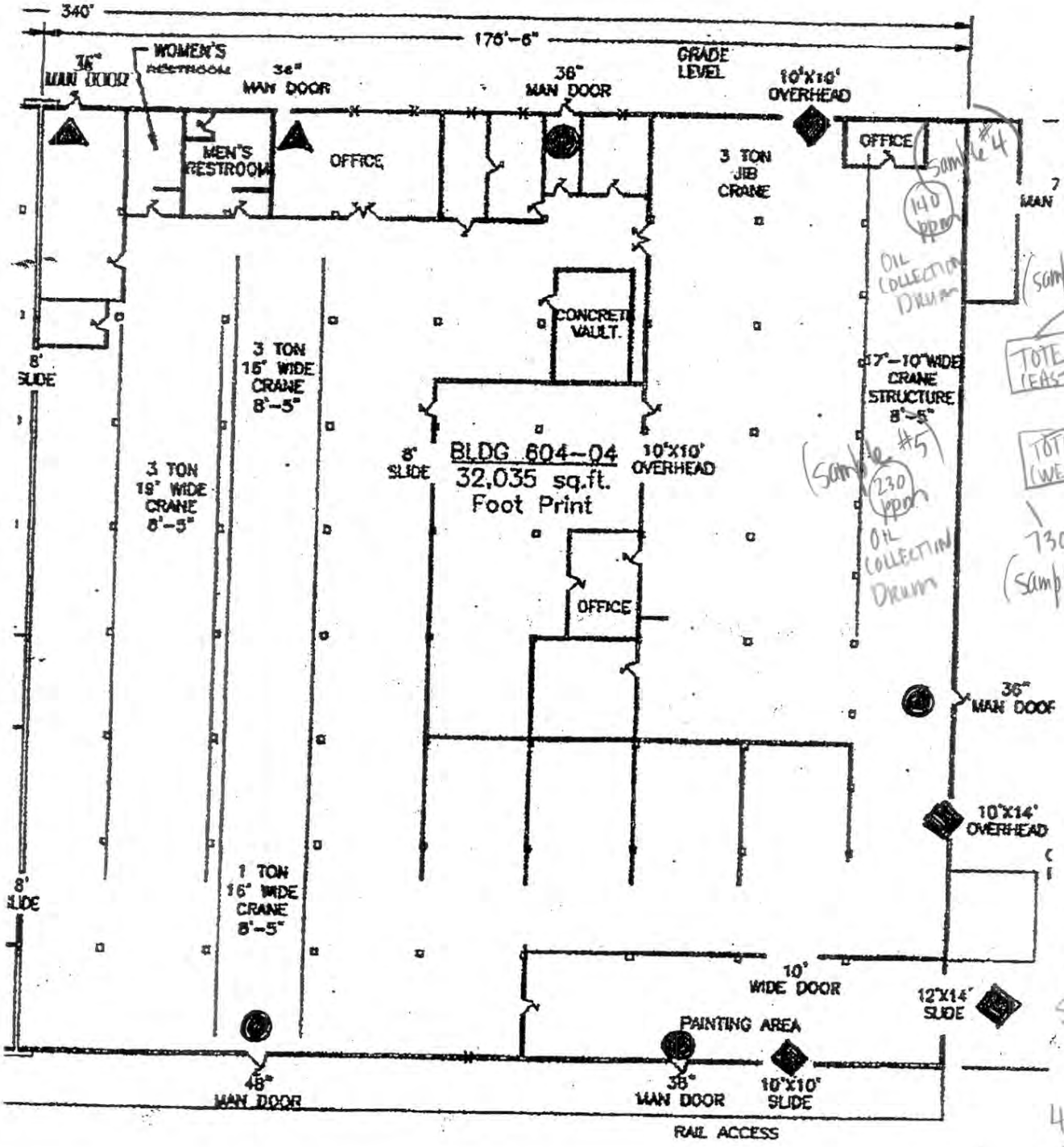
Bottle Type	Preservative	All pHs OK														
Ammonia	pH <2 H_2SO_4															
COD	pH <2 H_2SO_4															
Cyanide	PH >12 NaOH															
Metals	pH <2 HNO_3															
NO_2 & NO_3	pH <2 H_2SO_4															
Nutrients	pH <2 H_2SO_4															
O & G	pH <2 HCL															
Phenols	pH <2 H_2SO_4															
Sulfide	pH > 9NaOH, ZnAC															
TKN	pH <2 H_2SO_4															
TOC	pH <2 H_3PO_4															
T PO_4	pH <2 H_2SO_4															
TPH	pH <2 HCL															

DB

Procedure:
1) Pour a small amount of sample in the sample lid
2) Pour sample from Lid gently over wide range pH paper
3) **Do Not** dip the pH paper in the sample bottle or lid
4) If sample is not preserved properly list its extension and receiving pH in the appropriate column above
5) Flag COC and notify client for further instructions
6) Place client conversation on COC
7) Samples may be adjusted at client request

East

E, TOOELE, UTAH



(Sample #4) 140 ppm Oil Collection Drum

(Sample #3) 380ppm TOTE (EAST)

TOTE (WEST)

(Sample #5) 230 ppm Oil Collection Drum

73000 ppm (Sample #2)

ROLL OFF BIN Sample

40000 ppb (40 ppm) (Sample #1)

West

ESC
L·A·B S·C·I·E·N·C·E·S
YOUR LAB OF CHOICE

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

Report Summary

Wednesday March 17, 2010

Report Number: L449491
Samples Received: 03/16/10
Client Project:

Description: Burly Seal

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Daphne R Richards
Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.
Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

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Est. 1970

REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-01

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 1

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1221	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1232	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1242	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1248	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1254	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1260	BDL	5.1	mg/kg	8082	03/16/10	300
PCBs Surrogates						
Decachlorobiphenyl	115.		% Rec.	8082	03/16/10	300
Tetrachloro-m-xylene	97.7		% Rec.	8082	03/16/10	300

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

ESC
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Est. 1970

REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-02

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 2

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	5100	mg/kg	8082	03/16/10	300000
PCB 1221	BDL	5100	mg/kg	8082	03/16/10	300000
PCB 1232	BDL	5100	mg/kg	8082	03/16/10	300000
PCB 1242	BDL	5100	mg/kg	8082	03/16/10	300000
PCB 1248	32000	5100	mg/kg	8082	03/16/10	300000
PCB 1254	BDL	5100	mg/kg	8082	03/16/10	300000
PCB 1260	BDL	5100	mg/kg	8082	03/16/10	300000
PCBs Surrogates						
Decachlorobiphenyl	BDL		% Rec.	8082	03/16/10	300000
Tetrachloro-m-xylene	BDL		% Rec.	8082	03/16/10	300000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-02 (PCBS) - Waste Dilution

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Est. 1970

REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-03

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 3

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	260	mg/kg	8082	03/16/10	15000
PCB 1221	BDL	260	mg/kg	8082	03/16/10	15000
PCB 1232	BDL	260	mg/kg	8082	03/16/10	15000
PCB 1242	BDL	260	mg/kg	8082	03/16/10	15000
PCB 1248	830	260	mg/kg	8082	03/16/10	15000
PCB 1254	BDL	260	mg/kg	8082	03/16/10	15000
PCB 1260	BDL	260	mg/kg	8082	03/16/10	15000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/16/10	15000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/16/10	15000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-03 (PCBS) - Waste Dilution

ESC
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-04

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 4

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1221	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1232	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1242	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1248	54.	6.8	mg/kg	8082	03/16/10	400
PCB 1254	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1260	BDL	6.8	mg/kg	8082	03/16/10	400
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/16/10	400
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/16/10	400

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-05

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 5

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1221	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1232	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1242	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1248	110	26.	mg/kg	8082	03/17/10	1500
PCB 1254	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1260	BDL	26.	mg/kg	8082	03/17/10	1500
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	1500
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	1500

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-05 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-06

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 6

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1221	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1232	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1242	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1248	45.	6.8	mg/kg	8082	03/16/10	400
PCB 1254	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1260	BDL	6.8	mg/kg	8082	03/16/10	400
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/16/10	400
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/16/10	400

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-07

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 7

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1221	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1232	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1242	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1248	100	26.	mg/kg	8082	03/17/10	1500
PCB 1254	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1260	BDL	26.	mg/kg	8082	03/17/10	1500
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	1500
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	1500

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-07 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-08

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 8

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1221	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1232	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1242	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1248	140	26.	mg/kg	8082	03/17/10	1500
PCB 1254	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1260	BDL	26.	mg/kg	8082	03/17/10	1500
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	1500
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	1500

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-08 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
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2525 South 1100 W
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March 17, 2010

ESC Sample # : L449491-09

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 9

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1221	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1232	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1242	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1248	120	26.	mg/kg	8082	03/17/10	1500
PCB 1254	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1260	BDL	26.	mg/kg	8082	03/17/10	1500
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	1500
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	1500

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-09 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
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2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-10

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 10

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1221	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1232	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1242	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1248	100	26.	mg/kg	8082	03/17/10	1500
PCB 1254	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1260	BDL	26.	mg/kg	8082	03/17/10	1500
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	1500
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	1500

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-10 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
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2525 South 1100 W
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March 17, 2010

ESC Sample # : L449491-11

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 11

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1221	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1232	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1242	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1248	82.	6.8	mg/kg	8082	03/16/10	400
PCB 1254	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1260	BDL	6.8	mg/kg	8082	03/16/10	400
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/16/10	400
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/16/10	400

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
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March 17, 2010

ESC Sample # : L449491-12

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 12

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	140	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-12 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-13

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 13

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1221	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1232	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1242	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1248	120	26.	mg/kg	8082	03/17/10	1500
PCB 1254	BDL	26.	mg/kg	8082	03/17/10	1500
PCB 1260	BDL	26.	mg/kg	8082	03/17/10	1500
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	1500
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	1500

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-13 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-14

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 14

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	220	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-14 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
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March 17, 2010

ESC Sample # : L449491-15

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 15

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1221	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1232	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1242	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1248	56.	6.8	mg/kg	8082	03/16/10	400
PCB 1254	BDL	6.8	mg/kg	8082	03/16/10	400
PCB 1260	BDL	6.8	mg/kg	8082	03/16/10	400
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/16/10	400
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/16/10	400

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

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REPORT OF ANALYSIS

Fred Straughn
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2525 South 1100 W
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March 17, 2010

ESC Sample # : L449491-16

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 16

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	130	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-16 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
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March 17, 2010

ESC Sample # : L449491-17

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 17

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	180	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-17 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-18

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 18

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	230	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-18 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-19

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 19

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	250	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-19 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-20

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 20

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	210	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-20 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-21

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 21

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	110	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-21 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
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2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-22

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 22

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	110	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-22 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

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March 17, 2010

ESC Sample # : L449491-23

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 23

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	150	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-23 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
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Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-24

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 24

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	180	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-24 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
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March 17, 2010

ESC Sample # : L449491-25

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 25

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	130	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-25 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-26

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 26

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1248	120	51.	mg/kg	8082	03/17/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/17/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/17/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/17/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/17/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-26 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-27

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 27

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	17.	mg/kg	8082	03/16/10	1000
PCB 1221	BDL	17.	mg/kg	8082	03/16/10	1000
PCB 1232	BDL	17.	mg/kg	8082	03/16/10	1000
PCB 1242	BDL	17.	mg/kg	8082	03/16/10	1000
PCB 1248	59.	17.	mg/kg	8082	03/16/10	1000
PCB 1254	BDL	17.	mg/kg	8082	03/16/10	1000
PCB 1260	BDL	17.	mg/kg	8082	03/16/10	1000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/16/10	1000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/16/10	1000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-28

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 28

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	51.	mg/kg	8082	03/16/10	3000
PCB 1221	BDL	51.	mg/kg	8082	03/16/10	3000
PCB 1232	BDL	51.	mg/kg	8082	03/16/10	3000
PCB 1242	BDL	51.	mg/kg	8082	03/16/10	3000
PCB 1248	1700	51.	mg/kg	8082	03/16/10	3000
PCB 1254	BDL	51.	mg/kg	8082	03/16/10	3000
PCB 1260	BDL	51.	mg/kg	8082	03/16/10	3000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/16/10	3000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/16/10	3000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-28 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
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March 17, 2010

ESC Sample # : L449491-29

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 29

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	0.34	mg/kg	8082	03/16/10	20
PCB 1221	BDL	0.34	mg/kg	8082	03/16/10	20
PCB 1232	BDL	0.34	mg/kg	8082	03/16/10	20
PCB 1242	BDL	0.34	mg/kg	8082	03/16/10	20
PCB 1248	0.88	0.34	mg/kg	8082	03/16/10	20
PCB 1254	BDL	0.34	mg/kg	8082	03/16/10	20
PCB 1260	BDL	0.34	mg/kg	8082	03/16/10	20
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/16/10	20
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/16/10	20

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

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REPORT OF ANALYSIS

Fred Straughn
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2525 South 1100 W
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March 17, 2010

ESC Sample # : L449491-30

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 30

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	0.34	mg/kg	8082	03/16/10	20
PCB 1221	BDL	0.34	mg/kg	8082	03/16/10	20
PCB 1232	BDL	0.34	mg/kg	8082	03/16/10	20
PCB 1242	BDL	0.34	mg/kg	8082	03/16/10	20
PCB 1248	1.3	0.34	mg/kg	8082	03/16/10	20
PCB 1254	BDL	0.34	mg/kg	8082	03/16/10	20
PCB 1260	BDL	0.34	mg/kg	8082	03/16/10	20
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/16/10	20
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/16/10	20

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

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REPORT OF ANALYSIS

Fred Straughn
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March 17, 2010

ESC Sample # : L449491-31

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 31

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	0.0040	mg/l	8082	03/16/10	8
PCB 1221	BDL	0.0040	mg/l	8082	03/16/10	8
PCB 1232	BDL	0.0040	mg/l	8082	03/16/10	8
PCB 1242	BDL	0.0040	mg/l	8082	03/16/10	8
PCB 1248	BDL	0.0040	mg/l	8082	03/16/10	8
PCB 1254	BDL	0.0040	mg/l	8082	03/16/10	8
PCB 1260	BDL	0.0040	mg/l	8082	03/16/10	8
PCBs Surrogates						
Decachlorobiphenyl	69.3		% Rec.	8082	03/16/10	8
Tetrachloro-m-xylene	68.2		% Rec.	8082	03/16/10	8

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

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REPORT OF ANALYSIS

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March 17, 2010

ESC Sample # : L449491-32

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 32

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	0.50	mg/l	8082	03/16/10	1000
PCB 1221	BDL	0.50	mg/l	8082	03/16/10	1000
PCB 1232	BDL	0.50	mg/l	8082	03/16/10	1000
PCB 1242	BDL	0.50	mg/l	8082	03/16/10	1000
PCB 1248	3.6	0.50	mg/l	8082	03/16/10	1000
PCB 1254	BDL	0.50	mg/l	8082	03/16/10	1000
PCB 1260	BDL	0.50	mg/l	8082	03/16/10	1000
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	03/16/10	1000
Tetrachloro-m-xylene	0.00		% Rec.	8082	03/16/10	1000

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

ESC
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1-800-767-5859
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-33

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 33

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1221	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1232	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1242	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1248	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1254	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1260	BDL	5.1	mg/kg	8082	03/17/10	300
PCBs Surrogates						
Decachlorobiphenyl	77.3		% Rec.	8082	03/17/10	300
Tetrachloro-m-xylene	128.		% Rec.	8082	03/17/10	300

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-34

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 34

Project # :

Collected By :
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1221	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1232	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1242	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1248	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1254	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1260	BDL	5.1	mg/kg	8082	03/16/10	300
PCBs Surrogates						
Decachlorobiphenyl	103.		% Rec.	8082	03/16/10	300
Tetrachloro-m-xylene	114.		% Rec.	8082	03/16/10	300

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-34 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-35

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 35

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1221	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1232	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1242	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1248	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1254	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1260	BDL	5.1	mg/kg	8082	03/16/10	300
PCBs Surrogates						
Decachlorobiphenyl	89.9		% Rec.	8082	03/16/10	300
Tetrachloro-m-xylene	102.		% Rec.	8082	03/16/10	300

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-35 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-36

Site ID :

Project # :

Date Received : March 16, 2010
Description : Burly Seal

Sample ID : 36

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1221	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1232	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1242	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1248	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1254	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1260	BDL	5.1	mg/kg	8082	03/16/10	300
PCBs Surrogates						
Decachlorobiphenyl	67.0		% Rec.	8082	03/16/10	300
Tetrachloro-m-xylene	108.		% Rec.	8082	03/16/10	300

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-36 (PCBS) - Waste Dilution

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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-37

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 37

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1221	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1232	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1242	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1248	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1254	BDL	5.1	mg/kg	8082	03/17/10	300
PCB 1260	BDL	5.1	mg/kg	8082	03/17/10	300
PCBs Surrogates						
Decachlorobiphenyl	76.7		% Rec.	8082	03/17/10	300
Tetrachloro-m-xylene	103.		% Rec.	8082	03/17/10	300

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33

ESC
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Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

March 17, 2010

ESC Sample # : L449491-38

Date Received : March 16, 2010
Description : Burly Seal

Site ID :

Sample ID : 38

Project # :

Collected By : Fred Straughn
Collection Date : 03/15/10 00:00

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1221	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1232	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1242	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1248	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1254	BDL	5.1	mg/kg	8082	03/16/10	300
PCB 1260	BDL	5.1	mg/kg	8082	03/16/10	300
PCBs Surrogates						
Decachlorobiphenyl	87.8		% Rec.	8082	03/16/10	300
Tetrachloro-m-xylene	114.		% Rec.	8082	03/16/10	300

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

Reported: 03/17/10 16:32 Printed: 03/17/10 16:33
L449491-38 (PCBS) - Waste Dilution

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L449491-01	WG467928	SAMP	PCB 1016	R1147988	O
	WG467928	SAMP	PCB 1221	R1147988	O
	WG467928	SAMP	PCB 1232	R1147988	O
	WG467928	SAMP	PCB 1242	R1147988	O
	WG467928	SAMP	PCB 1248	R1147988	O
	WG467928	SAMP	PCB 1254	R1147988	O
	WG467928	SAMP	PCB 1260	R1147988	O
L449491-02	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-03	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-04	WG467913	SAMP	Decachlorobiphenyl	R1148030	J7
	WG467913	SAMP	Tetrachloro-m-xylene	R1148030	J7
L449491-05	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-06	WG467913	SAMP	Decachlorobiphenyl	R1148030	J7
	WG467913	SAMP	Tetrachloro-m-xylene	R1148030	J7
L449491-07	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-08	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-09	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-10	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-11	WG467913	SAMP	Decachlorobiphenyl	R1148030	J7
	WG467913	SAMP	Tetrachloro-m-xylene	R1148030	J7
L449491-12	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-13	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-14	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-15	WG467913	SAMP	Decachlorobiphenyl	R1148030	J7
	WG467913	SAMP	Tetrachloro-m-xylene	R1148030	J7
L449491-16	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-17	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-18	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-19	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-20	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-21	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-22	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-23	WG467928	SAMP	Decachlorobiphenyl	R1147988	J7
	WG467928	SAMP	Tetrachloro-m-xylene	R1147988	J7
L449491-24	WG467929	SAMP	Decachlorobiphenyl	R1148016	J7
	WG467929	SAMP	Tetrachloro-m-xylene	R1148016	J7
L449491-25	WG467929	SAMP	Decachlorobiphenyl	R1148016	J7
	WG467929	SAMP	Tetrachloro-m-xylene	R1148016	J7
L449491-26	WG467929	SAMP	Decachlorobiphenyl	R1148016	J7
	WG467929	SAMP	Tetrachloro-m-xylene	R1148016	J7
L449491-27	WG467913	SAMP	Decachlorobiphenyl	R1148030	J7
	WG467913	SAMP	Tetrachloro-m-xylene	R1148030	J7
L449491-28	WG467929	SAMP	Decachlorobiphenyl	R1148016	J7
	WG467929	SAMP	Tetrachloro-m-xylene	R1148016	J7
L449491-29	WG467913	SAMP	Decachlorobiphenyl	R1148030	J7
	WG467913	SAMP	Tetrachloro-m-xylene	R1148030	J7
L449491-30	WG467913	SAMP	Decachlorobiphenyl	R1148030	J7
	WG467913	SAMP	Tetrachloro-m-xylene	R1148030	J7
L449491-31	WG467811	SAMP	PCB 1260	R1148019	J3
L449491-32	WG467811	SAMP	PCB 1260	R1148019	J3
	WG467811	SAMP	Decachlorobiphenyl	R1148019	J7
	WG467811	SAMP	Tetrachloro-m-xylene	R1148019	J7

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L449491-36	WG467929	SAMP	Decachlorobiphenyl	R1148016	J2

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J2	Surrogate recovery limits have been exceeded; values are outside lower control limits
J3	The associated batch QC was outside the established quality control range for precision.
J7	Surrogate recovery limits cannot be evaluated; surrogates were diluted out
O	(ESC) Sample diluted due to matrix interferences that impaired the ability to make an accurate analytical determination. The detection limit is elevated in order to reflect the necessary dilution.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
03/17/10 at 16:33:18

TSR Signing Reports: 288
R2 - Rush: Next Day

Sample: L449491-01 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-02 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-03 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-04 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32

Sample: L449491-05 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-06 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-07 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-08 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-09 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-10 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-11 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32

Sample: L449491-12 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-13 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-14 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-15 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32

Sample: L449491-16 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-17 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-18 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-19 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-20 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-21 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-22 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-23 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-24 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-25 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-26 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-27 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32

Sample: L449491-28 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-29 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32

Sample: L449491-30 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32

Sample: L449491-31 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
LImited Sample Volume
Sample: L449491-32 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
LImited Sample Volume
Sample: L449491-33 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-34 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-35 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-36 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-37 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil
Sample: L449491-38 Account: PSCWCUT Received: 03/16/10 09:00 Due Date: 03/17/10 00:00 RPT Date: 03/17/10 16:32
Oil

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

Report Summary

Thursday May 20, 2010

Report Number: L459719
Samples Received: 05/19/10
Client Project:

Description: Burly Seal

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By: Daphne R Richards

Daphne Richards , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.
Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

ESC
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REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

May 20, 2010

ESC Sample # : L459719-01

Date Received : May 19, 2010
Description : Burly Seal

Site ID :

Sample ID : 1 W

Project # :

Collected By : FMS
Collection Date : 05/18/10 09:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	26.	mg/kg	8082	05/20/10	1500
PCB 1221	BDL	26.	mg/kg	8082	05/20/10	1500
PCB 1232	BDL	26.	mg/kg	8082	05/20/10	1500
PCB 1242	BDL	26.	mg/kg	8082	05/20/10	1500
PCB 1248	350	26.	mg/kg	8082	05/20/10	1500
PCB 1254	BDL	26.	mg/kg	8082	05/20/10	1500
PCB 1260	BDL	26.	mg/kg	8082	05/20/10	1500
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	05/20/10	1500
Tetrachloro-m-xylene	0.00		% Rec.	8082	05/20/10	1500

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 05/20/10 16:16 Printed: 05/20/10 16:16

ESC
L·A·B S·C·I·E·N·C·E·S
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Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

REPORT OF ANALYSIS

Fred Straughn
PSC
2525 South 1100 W
Woods Cross, UT 84087

May 20, 2010

ESC Sample # : L459719-02

Date Received : May 19, 2010
Description : Burly Seal

Site ID :

Sample ID : 2 E

Project # :

Collected By : FMS
Collection Date : 05/18/10 09:30

Parameter	Result	Det. Limit	Units	Method	Date	Dil.
Polychlorinated Biphenyls						
PCB 1016	BDL	26.	mg/kg	8082	05/20/10	1500
PCB 1221	BDL	26.	mg/kg	8082	05/20/10	1500
PCB 1232	BDL	26.	mg/kg	8082	05/20/10	1500
PCB 1242	BDL	26.	mg/kg	8082	05/20/10	1500
PCB 1248	220	26.	mg/kg	8082	05/20/10	1500
PCB 1254	BDL	26.	mg/kg	8082	05/20/10	1500
PCB 1260	BDL	26.	mg/kg	8082	05/20/10	1500
PCBs Surrogates						
Decachlorobiphenyl	0.00		% Rec.	8082	05/20/10	1500
Tetrachloro-m-xylene	0.00		% Rec.	8082	05/20/10	1500

BDL - Below Detection Limit
Det. Limit - Practical Quantitation Limit(PQL)
Note:
The reported analytical results relate only to the sample submitted.

.
Reported: 05/20/10 16:16 Printed: 05/20/10 16:16

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L459719-01	WG479306	SAMP	Decachlorobiphenyl	R1229589	J7
	WG479306	SAMP	Tetrachloro-m-xylene	R1229589	J7
L459719-02	WG479306	SAMP	Decachlorobiphenyl	R1229589	J7
	WG479306	SAMP	Tetrachloro-m-xylene	R1229589	J7

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J7	Surrogate recovery limits cannot be evaluated; surrogates were diluted out

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
05/20/10 at 16:16:34

TSR Signing Reports: 288
R2 - Rush: Next Day

Sample: L459719-01 Account: PSCWCUT Received: 05/19/10 09:00 Due Date: 05/20/10 00:00 RPT Date: 05/20/10 16:16
Oil
Sample: L459719-02 Account: PSCWCUT Received: 05/19/10 09:00 Due Date: 05/20/10 00:00 RPT Date: 05/20/10 16:16
Oil

AMERICAN WEST ANALYTICAL LABORATORIES

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Gary Mossor
AET Environmental
3653 S. 700 W. Unit B
Salt Lake City, UT 84119-
TEL: (801) 281-3507
FAX: (801) 281-3551

RE: MP. U.I.D.

Lab Set ID: 1003287

Dear Gary Mossor:

American West Analytical Laboratories received 1 sample(s) on 3/16/2010 for the analyses presented in the following report.

All analyses were performed in accordance to The NELAC Institute protocols unless noted otherwise. American West Analytical Laboratories is certified by The NELAC Institute in Utah and Texas; and is state certified in Colorado and Idaho. Certification document is available upon request. If you have any questions or concerns regarding this report please feel free to call.

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitaion limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit.

Thank You,

Approved by: _____
Laboratory Director or designee

ORGANIC ANALYTICAL REPORT

Client: AET Environmental
Project: MP. U.I.D.
Lab Sample ID: 1003287-001A
Client Sample ID: #1
Collection Date: 3/15/2010 1:05:00 PM
Received Date: 3/16/2010
Method Used: SW8082A

Contact: Gary Mossor
Analyzed: 3/17/2010 8:18:22 PM
Extracted: 3/16/2010 1:30:09 PM

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Analytical Results — PCBs by GC/ECD Method 8082A/3545A

Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	29	< 29	²
Aroclor 1221	11104-28-2	29	< 29	
Aroclor 1232	11141-16-5	29	< 29	
Aroclor 1242	53469-21-9	29	< 29	
Aroclor 1248	12672-29-6	15,000	**190,000**	D
Aroclor 1254	11097-69-1	29	< 29	
Aroclor 1260	11096-82-5	29	< 29	²
Surr: Decachlorobiphenyl	2051-24-3	10-180	**17.7**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**24.7**	

D - This analyte was obtained from a 1:500 dilution.
² - Analyte concentration(1248) is too high for accurate matrix spike recovery and/or RPD.
Sulfuric acid cleanup method 3665A utilized for this sample.

American West Analytical Laboratories

WORK ORDER Summary

17-Mar-10

Work Order: 1003287
WO Type: Standard

Client ID:	AET100	**Contact:**	Gary Mossor
Project ID:		**PM:**	
Project:	MP. U.I.D.	**QC Level:**	LEVEL I
ChkList Completed On:		**Completed By**	
ChkList Reviewed On:		**Reviewed By:**	
WO Reviewed On:	3/16/2010	**Reviewed By:**	10

DB

Sample ID	Client Sample ID	Date Collected	Date Received	Date Due	Matrix	Test Code	Hld	MS	SEL	Sub	Storage
1003287-001A	#1	3/15/2010 1:05:00 PM	3/16/2010 10:12:53 AM	3/30/2010	Soil	3545A-PCBS-PR	☐	☐	☐	☐	hall - pcb
				3/30/2010		8082-S	☐	☐	☑	☐	hall - pcb
				3/30/2010		PMOIST	☐	☐	☐	☐	hall - pcb

Client AET Environmental

Address 3653 S 700 W.

S.L.C City UT State Zip

Phone _____ Fax _____

Contact _____

E-mail _____

Project Name MP. U.I.D.

Project Number/P.O.# _____

Sampler Name Gary L Mosser

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CHAIN OF CUSTODY

Lab Sample Set # 1003287

Page 1 of 1

Turn Around Time (Circle One)

1 day 2 day 3 day 4 day 5 day (Standard)

Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	TESTS REQUIRED: Pcb's - Soil										QC LEVEL	COMMENTS
1	1305 3/15/10		1	X										1 2 2+ 3 3+ 4	Total Pcbs

LABORATORY USE ONLY

SAMPLES WERE:

1 Shipped or hand delivered
Notes:

2 Ambient or Chilled
Notes:

3 Temperature 4.3°

4 Received Broken/Leaking (Improperly Sealed)
Y N
Notes:

5 Properly Preserved
Y N
Checked at Bench
Y N
Notes:

6 Received Within Holding Times
Y N
Notes:

COC Tape Was:

1 Present on Outer Package
Y N NA

2 Unbroken on Outer Package
Y N NA

3 Present on Sample
Y N NA

4 Unbroken on Sample
Y N NA

Discrepancies Between Sample Labels and COC Record?
Y N
Notes:

Relinquished By: Signature	Date	Received By: Signature	Date
MP Box # 5774			3/15/10
PRINT NAME	Time	PRINT NAME Gary L. Mosser	Time 1305
Relinquished By: Signature	Date 3/16/10	Received By: Signature Denise Bruun	Date 3/16/10
PRINT NAME Gary L. Mosser	Time 9:17	PRINT NAME Denise Bruun	Time 9:17
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time

Special Instructions:

Appendix B

Laboratory Results – Collected by ERM

American West
ANALYTICAL LABORATORIES

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web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Teri Peterson
Environmental Resources Management
102 West 500 South, Suite 650
Salt Lake City, UT 84101
TEL: (801) 595-8400

RE: Burly Seal / 0129927

Dear Teri Peterson: Lab Set ID: 1104433

American West Analytical Laboratories received 16 sample(s) on 4/26/2011 for the analyses presented in the following report.

All analyses were performed in accordance to The NELAC Institute protocols unless noted otherwise. American West Analytical Laboratories is certified by The NELAC Institute in Utah and Texas; and is state certified in Colorado and Idaho. Certification document is available upon request. If you have any questions or concerns regarding this report please feel free to call.

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitaion limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Thank You,

Approved by: Kyle F. Gross Digitally signed by Kyle F. Gross DN: cn=Kyle F. Gross, o=AWAL, ou=AWAL, email=kyle@awal-labs.com, c=US Date: 2011.04.28 09:24:26 -06'00'

Laboratory Director or designee

American West
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web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-001A
Client Sample ID: BW1
Collection Date: 4/26/2011 1202h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 1625h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 5

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	1,560	< 1,560	
Aroclor 1221	11104-28-2	1,560	< 1,560	
Aroclor 1232	11141-16-5	1,560	< 1,560	
Aroclor 1242	53469-21-9	1,560	< 1,560	
Aroclor 1248	12672-29-6	1,560	**34,600**	
Aroclor 1254	11097-69-1	1,560	< 1,560	
Aroclor 1260	11096-82-5	1,560	< 1,560	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**237**	S
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**71.1**	

The reporting limits were raised due to high analyte concentrations.
S - Surrogate outside recovery limits. Minimum method criteria of one surrogate within established recovery limits was met.
Sulfuric acid cleanup method 3665A utilized for this sample.

American West
ANALYTICAL LABORATORIES

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web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-002A
Client Sample ID: BW2
Collection Date: 4/26/2011 1204h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 1358h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 5

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	1,570	< 1,570	
Aroclor 1221	11104-28-2	1,570	< 1,570	
Aroclor 1232	11141-16-5	1,570	< 1,570	
Aroclor 1242	53469-21-9	1,570	< 1,570	
Aroclor 1248	12672-29-6	1,570	**22,900**	
Aroclor 1254	11097-69-1	1,570	< 1,570	
Aroclor 1260	11096-82-5	1,570	< 1,570	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**176**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**83.5**	

The reporting limits were raised due to high analyte concentrations.
Sulfuric acid cleanup method 3665A utilized for this sample.

ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-003A
Client Sample ID: BW3
Collection Date: 4/26/2011 1205h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 1852h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 50

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	15,100	< 15,100	
Aroclor 1221	11104-28-2	15,100	< 15,100	
Aroclor 1232	11141-16-5	15,100	< 15,100	
Aroclor 1242	53469-21-9	15,100	< 15,100	
Aroclor 1248	12672-29-6	15,100	**476,000**	
Aroclor 1254	11097-69-1	15,100	< 15,100	
Aroclor 1260	11096-82-5	15,100	< 15,100	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**10.6**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**16.6**	

The reporting limits were raised due to high analyte concentrations.
Sulfuric acid cleanup method 3665A utilized for this sample.

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Laboratory Director
Jose Rocha
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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-004A
Client Sample ID: PW2
Collection Date: 4/26/2011 1210h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/26/2011 2003h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	305	< 305	
Aroclor 1221	11104-28-2	305	< 305	
Aroclor 1232	11141-16-5	305	< 305	
Aroclor 1242	53469-21-9	305	< 305	
Aroclor 1248	12672-29-6	305	249	J
Aroclor 1254	11097-69-1	305	< 305	
Aroclor 1260	11096-82-5	305	< 305	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**115**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**93.4**	

J - Estimated value between the MDL if 31.7 µg/L and the reporting limit (PQL).
Sulfuric acid cleanup method 3665A utilized for this sample.

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web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-005A
Client Sample ID: PW6
Collection Date: 4/26/2011 1215h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 1910h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 5

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	152	< 152	
Aroclor 1221	11104-28-2	152	< 152	
Aroclor 1232	11141-16-5	152	< 152	
Aroclor 1242	53469-21-9	152	< 152	
Aroclor 1248	12672-29-6	152	**2,390**	
Aroclor 1254	11097-69-1	152	< 152	
Aroclor 1260	11096-82-5	152	< 152	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**81.5**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**267**	S

The reporting limits were raised due to high analyte concentrations.
S - Surrogate outside recovery limits. Minimum method criteria of one surrogate within established recovery limits was met.
Sulfuric acid cleanup method 3665A utilized for this sample.

ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-006A
Client Sample ID: C1
Collection Date: 4/26/2011 1053h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/26/2011 2040h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	25.2	< 25.2	
Aroclor 1221	11104-28-2	25.2	< 25.2	
Aroclor 1232	11141-16-5	25.2	< 25.2	
Aroclor 1242	53469-21-9	25.2	< 25.2	
Aroclor 1248	12672-29-6	25.2	< 25.2	
Aroclor 1254	11097-69-1	25.2	< 25.2	
Aroclor 1260	11096-82-5	25.2	**369**	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**83.0**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**110**	

Sulfuric acid cleanup method 3665A utilized for this sample.

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web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-007A
Client Sample ID: C2
Collection Date: 4/26/2011 1117h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 1530h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 20

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	503	< 503	
Aroclor 1221	11104-28-2	503	< 503	
Aroclor 1232	11141-16-5	503	< 503	
Aroclor 1242	53469-21-9	503	< 503	
Aroclor 1248	12672-29-6	503	**11,200**	
Aroclor 1254	11097-69-1	503	< 503	
Aroclor 1260	11096-82-5	503	< 503	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**81.3**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**86.4**	

The reporting limits were raised due to high analyte concentrations.
Sulfuric acid cleanup method 3665A utilized for this sample.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-008A
Client Sample ID: C3
Collection Date: 4/26/2011 1140h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 1548h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 5

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	126	< 126	
Aroclor 1221	11104-28-2	126	< 126	
Aroclor 1232	11141-16-5	126	< 126	
Aroclor 1242	53469-21-9	126	< 126	
Aroclor 1248	12672-29-6	126	**1,060**	
Aroclor 1254	11097-69-1	126	< 126	
Aroclor 1260	11096-82-5	126	< 126	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**44.8**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**41.4**	

The reporting limits were raised due to high analyte concentrations.
Sulfuric acid cleanup method 3665A utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-009A
Client Sample ID: C4
Collection Date: 4/26/2011 1200h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 1607h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 5

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	127	< 127	
Aroclor 1221	11104-28-2	127	< 127	
Aroclor 1232	11141-16-5	127	< 127	
Aroclor 1242	53469-21-9	127	< 127	
Aroclor 1248	12672-29-6	127	**3,690**	
Aroclor 1254	11097-69-1	127	< 127	
Aroclor 1260	11096-82-5	127	< 127	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**83.1**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**80.7**	

The reporting limits were raised due to high analyte concentrations.
Sulfuric acid cleanup method 3665A utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-010A
Client Sample ID: S1
Collection Date: 4/26/2011 1037h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 0001h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	26.2	< 26.2	
Aroclor 1221	11104-28-2	26.2	< 26.2	
Aroclor 1232	11141-16-5	26.2	< 26.2	
Aroclor 1242	53469-21-9	26.2	< 26.2	
Aroclor 1248	12672-29-6	26.2	< 26.2	
Aroclor 1254	11097-69-1	26.2	< 26.2	
Aroclor 1260	11096-82-5	26.2	< 26.2	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**79.6**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**82.3**	

Sulfuric acid cleanup method 3665A utilized for this sample.

ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-011A
Client Sample ID: S2
Collection Date: 4/26/2011 1040h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 1833h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 20

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	532	< 532	
Aroclor 1221	11104-28-2	532	< 532	
Aroclor 1232	11141-16-5	532	< 532	
Aroclor 1242	53469-21-9	532	< 532	
Aroclor 1248	12672-29-6	532	**12,900**	
Aroclor 1254	11097-69-1	532	< 532	
Aroclor 1260	11096-82-5	532	< 532	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**63.2**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**69.3**	

The reporting limits were raised due to high analyte concentrations.
Sulfuric acid cleanup method 3665A utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-012A
Client Sample ID: S3
Collection Date: 4/26/2011 1047h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 0322h **Extracted:** 4/26/2011 1409h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	27.0	< 27.0	
Aroclor 1221	11104-28-2	27.0	< 27.0	
Aroclor 1232	11141-16-5	27.0	< 27.0	
Aroclor 1242	53469-21-9	27.0	< 27.0	
Aroclor 1248	12672-29-6	27.0	17.0	J
Aroclor 1254	11097-69-1	27.0	< 27.0	
Aroclor 1260	11096-82-5	27.0	< 27.0	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**87.2**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**105**	

J - Estimated value between the MDL of 2.81 µg/L and the reporting limit (PQL).
Sulfuric acid cleanup method 3665A utilized for this sample.

ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-013A
Client Sample ID: PW1
Collection Date: 4/26/2011 1005h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 0340h **Extracted:** 4/26/2011 1409h
Units: µg/wipe
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	0.00180	< 0.00180	
Aroclor 1221	11104-28-2	0.00180	< 0.00180	
Aroclor 1232	11141-16-5	0.00180	< 0.00180	
Aroclor 1242	53469-21-9	0.00180	< 0.00180	
Aroclor 1248	12672-29-6	0.00180	**1.49**	
Aroclor 1254	11097-69-1	0.00180	< 0.00180	
Aroclor 1260	11096-82-5	0.00180	< 0.00180	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**81.6**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**95.0**	

Sulfuric acid cleanup method 3665A utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-014A
Client Sample ID: PW3
Collection Date: 4/26/2011 1007h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 0358h **Extracted:** 4/26/2011 1409h
Units: µg/wipe
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	0.00180	< 0.00180	
Aroclor 1221	11104-28-2	0.00180	< 0.00180	
Aroclor 1232	11141-16-5	0.00180	< 0.00180	
Aroclor 1242	53469-21-9	0.00180	< 0.00180	
Aroclor 1248	12672-29-6	0.00180	**0.349**	
Aroclor 1254	11097-69-1	0.00180	< 0.00180	
Aroclor 1260	11096-82-5	0.00180	< 0.00180	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**81.4**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**97.1**	

Sulfuric acid cleanup method 3665A utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-015A
Client Sample ID: PW4
Collection Date: 4/26/2011 1011h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 0417h **Extracted:** 4/26/2011 1409h
Units: µg/wipe
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	0.00180	< 0.00180	
Aroclor 1221	11104-28-2	0.00180	< 0.00180	
Aroclor 1232	11141-16-5	0.00180	< 0.00180	
Aroclor 1242	53469-21-9	0.00180	< 0.00180	
Aroclor 1248	12672-29-6	0.00180	**2.67**	
Aroclor 1254	11097-69-1	0.00180	< 0.00180	
Aroclor 1260	11096-82-5	0.00180	< 0.00180	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**74.1**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**97.2**	

Sulfuric acid cleanup method 3665A utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Environmental Resources Management **Contact:** Teri Peterson
Project: Burly Seal / 0129927
Lab Sample ID: 1104433-016A
Client Sample ID: PW5
Collection Date: 4/26/2011 1015h
Received Date: 4/26/2011 1325h **Method:** SW8082A

Analytical Results PCBs by GC/ECD Method 8082A/3546

Analyzed: 4/27/2011 0435h **Extracted:** 4/26/2011 1409h
Units: µg/wipe
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Aroclor 1016	12674-11-2	0.00180	< 0.00180	
Aroclor 1221	11104-28-2	0.00180	< 0.00180	
Aroclor 1232	11141-16-5	0.00180	< 0.00180	
Aroclor 1242	53469-21-9	0.00180	< 0.00180	
Aroclor 1248	12672-29-6	0.00180	**2.37**	
Aroclor 1254	11097-69-1	0.00180	< 0.00180	
Aroclor 1260	11096-82-5	0.00180	< 0.00180	
Surr: Decachlorobiphenyl	2051-24-3	10-180	**74.2**	
Surr: Tetrachloro-m-xylene	877-09-8	10-135	**94.5**	

Sulfuric acid cleanup method 3665A utilized for this sample.

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RUSH

WORK ORDER Summary

Work Order: 1104433

Client: Environmental Resources Management
Client ID: ERM100
Project: Burly Seal / 0129927
Comments: No Hard Copies. / 2 Day Rush;

Contact: Teri Peterson
QC Level: LEVEL I

4/27/2011
WO Type: Standard

sb/eh

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1104433-001A	BW1	4/26/2011 12:02:00 PM	4/26/2011 1:25:00 PM	4/28/2011	Solid	3546-PCBS-PR	☐	Hall-PCB	1
				4/28/2011		8082-S	☑	Hall-PCB	
				4/28/2011		PMOIST	☐	Hall-PCB	
1104433-002A	BW2	4/26/2011 12:04:00 PM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-S	☑	Hall-PCB	
				4/28/2011		PMOIST	☐	Hall-PCB	
1104433-003A	BW3	4/26/2011 12:05:00 PM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-S	☑	Hall-PCB	
				4/28/2011		PMOIST	☐	Hall-PCB	
1104433-004A	PW2	4/26/2011 12:10:00 PM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-S	☑	Hall-PCB	
				4/28/2011		PMOIST	☐	Hall-PCB	
1104433-005A	PW6	4/26/2011 12:15:00 PM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-S	☑	Hall-PCB	
				4/28/2011		PMOIST	☐	Hall-PCB	
1104433-006A	C1	4/26/2011 10:53:00 AM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-S	☑	Hall-PCB	
				4/28/2011		PMOIST	☐	Hall-PCB	
1104433-007A	C2	4/26/2011 11:17:00 AM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-S	☑	Hall-PCB	
				4/28/2011		PMOIST	☐	Hall-PCB	
1104433-008A	C3	4/26/2011 11:40:00 AM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-S	☑	Hall-PCB	
				4/28/2011		PMOIST	☐	Hall-PCB	
1104433-009A	C4	4/26/2011 12:00:00 PM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-S	☑	Hall-PCB	
				4/28/2011		PMOIST	☐	Hall-PCB	
1104433-010A	S1	4/26/2011 10:37:00 AM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-S	☑	Hall-PCB	

WORK ORDER Summary

Work Order: 1104433

Client: Environmental Resources Management
Client ID: ERM100
Project: Burly Seal / 0129927
Comments: No Hard Copies. / 2 Day Rush;

Contact: Teri Peterson
QC Level: LEVEL I

4/27/2011
WO Type: Standard

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1104433-010A	S1	4/26/2011 10:37:00 AM	4/26/2011 1:25:00 PM	4/28/2011	Solid	PMOIST	☐	Hall-PCB	1
1104433-011A	S2	4/26/2011 10:40:00 AM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-S	☑	Hall-PCB	
				4/28/2011		PMOIST	☐	Hall-PCB	
1104433-012A	S3	4/26/2011 10:47:00 AM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-S	☑	Hall-PCB	
				4/28/2011		PMOIST	☐	Hall-PCB	
1104433-013A	PW1	4/26/2011 10:05:00 AM		4/28/2011	Wipe	3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-WIPE	☑	Hall-PCB	
1104433-014A	PW3	4/26/2011 10:07:00 AM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-WIPE	☑	Hall-PCB	
1104433-015A	PW4	4/26/2011 10:11:00 AM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-WIPE	☑	Hall-PCB	
1104433-016A	PW5	4/26/2011 10:15:00 AM		4/28/2011		3546-PCBS-PR	☐	Hall-PCB	
				4/28/2011		8082-WIPE	☑	Hall-PCB	

Client ERM

Address 102 West 500 South Suite 650
Salt Lake City UT 84101
City State Zip

Phone 801-595-8400 Fax

Contact Teri Peterson

E-mail teri.peterson@erm.com

Project Name Bucky Seal

Project Number/P.O.# 0129927

Sampler Name Teri Peterson

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CHAIN OF CUSTODY

Lab Sample Set # 1104433

Page 1 of 2

Turn Around Time (Circle One)

1 day (2 day) 3 day 4 day 5 day Standard

Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	TESTS REQUIRED: PCB	QC LEVEL	COMMENTS
BW1	4/26/11 - 12:02	S	1	X		
BW2	12:04		1	X		
BW3	12:05		1	X		
PW2	12:10		1	X		
PW6	12:15		1	X		
C1	10:53		1	X		
C2	11:17		1	X		
C3	11:40		1	X		
C4	12:00		1	X		
S1	10:37		1	X		
S2	10:40		1	X		
S3	10:47		1	X		

QC LEVEL: (1) 2 2+ 3 3+ 4

Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME: Teri Peterson	Time: 1:25pm	PRINT NAME: Rebekah Winkler	Time: 13:25
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time

Special Instructions:

LABORATORY USE ONLY

SAMPLES WERE:

1 Shipped or hand delivered
Notes:

2 Ambient or Chilled
Notes:

3 Temperature 3.7°C

4 Received Broken/Leaking (Improperly Sealed)
Y (N)
Notes:

5 Properly Preserved
Y N
Checked at Bench
Y N
Notes:

6 Received Within Holding Times
Y N
Notes:

COC Tape Was:

1 Present on Outer Package
Y N NA
4/26/11

2 Unbroken on Outer Package
Y N NA

3 Present on Sample
Y N NA

4 Unbroken on Sample
Y N NA

Discrepancies Between Sample Labels and COC Record?
Y (N)
Notes:

Client ERM

Address 102 W 500S Suite 650

Salt Lake City UT 84101

City State Zip

Phone 801-595-8400 Fax

Contact Teri Peterson

E-mail teri.peterson@erm.com

Project Name Bully Seal

Project Number/P.O.# 0129927

Sampler Name teri peterson

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CHAIN OF CUSTODY

Lab Sample Set # 1104433

Page 2 of 2

Turn Around Time (Circle One)

1 day (2 day) 3 day 4 day 5 day Standard

Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	TESTS REQUIRED: PCB	COMMENTS
PW1	4/20/11 10:05	W	1	X	
PW3	10:07		1	X	
PW4	10:11		1	X	
PW5	10:15		1	X	

QC LEVEL

(1) 2 2+

3 3+ 4

LABORATORY USE ONLY

SAMPLES WERE:

1 Shipped or hand delivered
Notes:

2 (Ambient) or Chilled
Notes:

3 Temperature 3.7°C

4 Received Broken/Leaking (Improperly Sealed)
Y (N)
Notes:

5 (Properly Preserved)
(Y) N
Checked at Bench
(Y) N
Notes:

6 Received Within Holding Times
(Y) N
Notes:

COC Tape Was:

1 Present on Outer Package
(Y) N NA

2 Unbroken on Outer Package
(Y) N NA

3 Present on Sample
(Y) N NA

4 Unbroken on Sample
(Y) N NA

Discrepancies Between Sample Labels and COC Record?
Y (N)
Notes:

Relinquished By: *Signature*	Date	Received By: *Signature*	Date
PRINT NAME: teri peterson	Time: 1:25 pm	PRINT NAME: REBEKAH WINKLER	Time: 13:25
Relinquished By: *Signature*	Date	Received By: *Signature*	Date
PRINT NAME	Time	PRINT NAME	Time
Relinquished By: *Signature*	Date	Received By: *Signature*	Date
PRINT NAME	Time	PRINT NAME	Time
Relinquished By: *Signature*	Date	Received By: *Signature*	Date
PRINT NAME	Time	PRINT NAME	Time

Special Instructions:

Appendix C

Sampling Equipment Decontamination Standard Operating Procedures

SAMPLING EQUIPMENT DECONTAMINATION
STANDARD OPERATING PROCEDURES

Procedures

All non-disposable equipment used for the collection, preparation, preservation, and storage of environmental samples must be cleaned prior to their use and after each subsequent use. Unless the equipment and materials being used are disposable or of sufficient number so as not to be reused during any one sampling period, decontamination will be conducted in the field. In order to prevent cross-contamination among sampling locations, all sampling equipment will be decontaminated as described below.

Before any equipment decontamination is conducted, a cleaning and decontamination area will be set up on the site. The cleaning area will be away from sources of contamination (such as exhaust fumes or dust, for example). Equipment that will be in contact with samples (such as bailers, split-spoon samplers, stainless steel spoons, hand augers, and trowel soil samplers) will be decontaminated.

Prior to arrival on site, large equipment (such as drilling equipment, backhoes, etc.) will be steam cleaned. Drilling equipment, backhoes, etc. will be free from excess grease, oils, and caked-on soils from previous work prior to arrival at the site.

Large equipment will be decontaminated by steam cleaning prior to departure from the site. Augers and other down-hole equipment will be decontaminated by steam cleaning prior to the first borehole and between each borehole thereafter.

The procedure for decontaminating sampling equipment will be as follows.

1. Clean with distilled water and phosphate-free laboratory detergent (Liquinox® or equivalent) using a brush if necessary to remove particulate matter and surface films.

2. Rinse thoroughly with distilled water.

3. If liquid contaminants remain on the sampling equipment (e.g., free product, DNAPL, etc.) Pesticide-grade isopropanol may be used to aid in removing the contaminants. The equipment will be allowed to air dry for a minimum of 10 minutes after the application of

isopropanol, and the decontamination process will then be restarted at Step 1.

4. Rinse three times with distilled water.

5. Rinse with pesticide grade hexane

6. Rinse with 10% Nitric Acid (only for samples collected for metals analysis).

7. Rinse thoroughly with deionized water and allow to air dry.

8. Wrap sampling equipment completely with aluminum foil, shiny side out, to prevent contamination if equipment is to be stored or transported.

9. Equipment such as pumps, flow lines, etc. will be flushed thoroughly with a distilled water and phosphate-free laboratory detergent mixture and then with distilled water prior to, and after, each use.

10. Large equipment or materials not used immediately after decontamination will be placed on a plastic sheet, covered with plastic, and secured to avoid potential contamination.

11. Clean, disposable gloves will be worn while handling sampling equipment during the final stages of decontamination.

All decontamination rinsate will be collected and drummed for proper management in accordance with applicable state and federal regulations.

Appendix D

ERM's Health and Safety Plan

LEVEL 2 INTRUSIVE WARN
HEALTH AND SAFETY PLAN
GMS Project # 0129927

This Level 2 WARN HASP is intended to provide health and safety guidelines for project field work meeting the following criteria:

- **Short-duration work not exceeding 30 consecutive days**
- **"Buddy System" in use**
- **Some likelihood of chemical and/or physical hazard exposure**
- **Limited number of job tasks (5 or less)**
- **No confined space entry or supplied-air respirator use**
- **Limited number of subcontractors involved (2 or less)**

The Project Manager should review this Health and Safety Plan with all ERM project personnel and maintain the HASP in project files. H&S Team review is required for the Level 2 WARN and should be accomplished by sending the completed document to the "ERM NA Safety Leads" Outlook email group.

Administrative Information **This document is valid for a maximum time period of one year after initial completion.** **A minimum of two persons with appropriate training and medical surveillance must be onsite. A mix of ERM and other personnel can satisfy this requirement.**	Site Name and Location Burly Seal, 1865 West D Avenue, Building 604, Utah Industrial Depot, Tooele, Utah	
	Client Contact and Phone Gerry Beck (C: 801-541-9368, O: 469-398-2035), Elaine Cawley (C: 801-201-8502, O: 435-578-0577)	
	Project Name Burly Seal PCB Remediation Oversight/Sampling	
	Health & Safety Plan Date 12 April 2011	Revision Number and Date rev. 0 - April 12, 2011
	Field Work Start Date 4/18/11 (1 day sampling) & 5/31/11 (oversight)	Anticipated Field Work End Date 30 June 2011
	Project Manager (*responsible for implementing the site health and safety program on this project*) Teri Peterson	Partner In Charge (*responsible for overall site health and safety performance on this project).* David S. Wilson

H&S Team Review	Review Date	Signature

Project Background and Scope of Work **Include bullet list of tasks to be completed by ERM personnel during this project, and a separate list of tasks to be completed by any subcontractors at the site.**	ERM Scope of Work: Characterization and confirmation sampling for PCBs (concrete samples, wall surface samples, and wipe samples). Oversight of contractor performing remediation for PCB contamination. Subcontractor Scope of Work: PCB remediation inside of a building where PCB-contaminated oil had been used in hydraulic presses, including the following tasks: disassembly of hydraulic presses and auxiliary equipment and draining oil, cutting piping and miscellaneous materials to length for disposal, for selected hydraulic presses to remain on site - flushing hydraulic presses with solvent and cleaning exterior surfaces, moving equipment and cleaning concrete floor (likely by pressure washing; removal of some concrete may be required). The subcontractor will be required to prepare a HASP for his work tasks.

Site/Project General Information **An asterisk (*) indicates that a completed Risk Assessment checklist must be completed and attached to this document.**	Site Type (check all applicable boxes)			
	☒ Active Facility*	☐ Remote Facility*	☐ Inactive Facility*	☐ Inactive Facility*
	☐ Mine	☐ Railroad	☒ Industrial	☐ Residential
	☒ Secured	☐ Uncontrolled	☐ Chemical Mixing**	☐ Other (specify)

A double asterisk (**) indicates that a Risk Review must take place prior to beginning fieldwork on the project.

Main Site Hazards (check all applicable boxes)

☐ Heat Stress	☐ Cold Stress	☐ Explosion/Fire	☐ Oxygen Deficiency
☐ Biological	☐ Organic Chemicals	☒ Inorganic Chemicals	☒ Heavy Equipment in Use
☐ Compressed Gas	☐ Asbestos	☐ High Noise	☐ Respirable Particles
☐ Work Over 6' High	☐ Extreme Weather	☒ Hand/Portable Power Tools	☐ Non-Ionizing Radiation
☐ Blasting Agents	☐ Confined Spaces	☐ ASTs/USTs	☐ Buried/Overhead Utilities
☒ Slip/Trip/Fall	☒ Forklift Use	☐ Manlift/Cherry Picker Use	☐ Heavy Equipment Use
☐ Scaffold Use	☒ Portable Ladders	☐ Welding or Hot Work	☐ Construction
☐ Excavations	☐ Extreme Weather	☐ Hand/Portable Power Tools	☐ Strip/Underground Mines
☐ Lockout/Tagout	☐ Commercial Vehicle	☐ Other (*specify*)	☐ Other (*specify*)

Chemical Products ERM will Use or Store Onsite

For each chemical product identified, an MSDS must be attached to this WARN HASP

☐ Alconox or Liquinox	☐ Calibration gas (Methane)	☐ Isopropyl Alcohol
☐ Hydrochloric acid (HCl)*	☐ Calibration gas (Isobutylene)	☐ Household bleach (NaOCl)*
☐ Nitric acid (HNO_3)*	☐ Calibration gas (Pentane)	☐ Sulfuric acid (H_2SO_4)*
☐ Sodium hydroxide (NaOH)*	☐ Calibration gas (4-gas mixture)	☒ Hexane
	☐ Other (specify)	☐ Other (specify)

***NOTE: Eyewash solution shall be readily available on ALL projects where corrosive materials are used or stored, including sample preservatives.**

Safe Work Practices

Place a checkmark by applicable SWPs and attach to this document

For hazards not covered by SWPs listed in this section, list the task name and complete a Job Hazard Analysis sheet (JHA) for each

SWPs Applicable To This Project (check all applicable boxes)

☒ 1-Hazard Communication	☒ 3-Medical Services and First Aid	☐ 4-Airborne Contaminants	☐ 5-Heat Stress
☐ 6-Cold Stress	☐ 7-Natural Hazards	☒ 8-Personal Protective Equipment	☐ 9-Respiratory Protection
☐ 10-Confined Space Entry	☒ 11-Drum Handling	☐ 13-Excavation	☐ 14-Fall Protection and Prevention
☐ 16-Forklift and Truck Operations	☒ 17-Hand Tools	☐ 19-Heavy and Material Handling Equipment	☒ 20-Ladder Safety
☐ **Other Task (specify)**	☐ **Other Task (specify)**	☐ **Other Task (specify)**	☐ **Other Task (specify)**
☐ **Other Task (specify)**	☐ **Other Task (specify)**	☐ **Other Task (specify)**	☐ **Other Task (specify)**

Levels of Protection Required for each Task

Signature of the H&S Team on page 1 of this document signifies certification of PPE Hazard Assessment

Task Description	Level			
	A	B	C	D
Sampling	☐	☐	☐	☒
Remediation Subcontractor Oversight	☐	☐	☐	☒
	☐	☐	☐	☐
	☐	☐	☐	☐
	☐	☐	☐	☐

Personal Protective Equipment	Equipment	Req	Rec	NA	Equipment	Req	Rec	NA
Req=Required Rec=Recommended	Steel Toe Boots	☒	☐	☐	Hard Hat	☒	☐	☐
	Long Sleeve Shirt & Pants	☒	☐	☐	Safety Glasses Shields	☒	☐	☐
	Outer Disposable Boots	☐	☒	☐	Indirect Vented Goggles	☐	☐	☐
	Tyvek Suit	☐	☒	☐	Poly-Coated Tyvek	☐	☐	☐
	Fully Encapsulated Chemical Suit	☐	☐	☐	Full-Face Respirator	☐	☐	☐
	Hearing Protection	☐	☒	☐	Half-Face Respirator	☐	☐	☐
	Leather Gloves	☐	☐	☐	Inner Chemical Gloves	☐	☐	☐
	Outer Chemical Gloves	☐	☒	☐	Other (specify)	☐	☐	☐
Training and Medical Surveillance	**Training**	**Req**	**Rec**	**NA**	**Medical Surveillance**	**Req**	**Rec**	**NA**
Req=Required Rec=Recommended	40 Hour HAZWOPER	☒	☐	☐	Medical Clearance	☒	☐	☐
	Current 8 Hour HAZWOPER	☒	☐	☐	Respirator Clearance	☐	☐	☐
	8 Hour HAZWOPER Supervisor*	☐	☐	☐	Blood Lead and ZPP	☐	☐	☐
	Current CPR and First Aid*	☐	☐	☐	Other (specify)	☐	☐	☐
	10 Hour Construction	☐	☐	☐	Other (specify)	☐	☐	☐
	ERM H&S Management System	☐	☐	☐				
	ERM Site Safety Officer*	☐	☐	☐				
	Other (specify)	☐	☐	☐				
	Other (specify)	☐	☐	☐				
Safety Supplies	**Supplies**	**Req**	**Rec**	**NA**	**Supplies**	**Req**	**Rec**	**NA**
Req=Required Rec=Recommended	First Aid Kit	☒	☐	☐	Fire Extinguisher	☐	☐	☐
	Eyewash Solution	☐	☐	☐	Water/Sports Drink	☐	☐	☐
	Air Horn	☐	☐	☐	Oral Thermometer	☐	☐	☐
	Noise Meter (Dosimeter)	☐	☐	☐	Decontamination Supplies	☐	☐	☐

Subsurface Clearance Information Sources Summary **Document the information sources that ERM used or will use to locate Subsurface Structures on site.**	**Information Source**	**Yes**	**No**	**N/A**	**Comment**
	Facility-provided Map(s) of Utilities	☐	☒	☐	Date(s):
	Knowledgeable Contact Person	☒	☐	☐	Who:Gerry Beck Time in Job: Time at Site: NA
	Public Utility Markouts	☐	☐	☒	Who: NA - All work (3 concrete borings) being done indoors Tech. Used: Target Services:
	ERM subcontractor performed geophysics / cable avoidance scans	☐	☒	☐	Who: Garrett Rigard (ERM) Tech. Used: Magnetic detector Target Services: Magnetic detector to check 3 core locations for electrical - no other utilities expected

Site Services Model	Utility / Service	Present	Expected Depth	Located?		Absent	Unknown	Comment
				Yes	No			
List the utilities or other below ground services present on site. **Do we know the locations of these services, their conveyance on site (to the site boundary, as appropriate) and the location of isolation switches or valves?** **If "Present" and not located or "Unknown", comment on how those gaps will be addressed.**	Electricity	☐		☐	☐	☐	☒	
	Gas	☐	2+ ft	☐	☐	☐	☒	Concrete core and soil sampling limited to top 12 inches; utilities expected >2 feet
	Water	☐	2+ ft	☐	☐	☐	☒	Concrete core and soil sampling limited to top 12 inches; utilities expected >2 feet
	Sewer	☐	2+ ft	☐	☐	☐	☒	Concrete core and soil sampling limited to top 12 inches; utilities expected >2 feet
	Telephone / Data	☐		☐	☐	☐	☒	
	Plant air / steam	☒		☒	☐	☐	☐	Aboveground
	Fuel / oil	☒		☒	☐	☐	☐	Aboveground
	Fire suppression	☐		☐	☐	☐	☒	
	Others (List):	☐		☐	☐	☐	☒	
		☐		☐	☐	☐	☐	

Attach a figure / drawing showing the conveyance and isolation switches or values for each located utility or service above.

Subsurface Clearance Process Waivers **Document any waivers to the process approved by the PIC.** **Legally required steps cannot be waived.**	Waiver For...	Waived By (PIC)	Date	Reason
	Performance of Public Utility Markouts	DSN	4/13/11	All work performed inside client building
	Performance of Private Utility Markouts	DSN	4/13/11	ERM to perform magnetic clearance at three boreholes
	Restricting ground disturbance inside a Critical Zone			
	Physical Clearance at Disturbance Locations (list)			

Overhead Clearance **Document the steps that must be followed and justify any exceptions**	Requirement	Yes	No	How will it be done? Why the exception?
	Are overhead utility lines in the general vicinity of ERM work onsite?	☐	☐	NA - Work indoors; no drilling mast to be raised. Only three concrete cores through slab floor.
	If overhead utilities are present, has nominal voltage been determined? If yes, list in comments section.	☐	☐	
	Before drill rig mast is raised in the vicinity of power lines, have we ensured that the minimum horizontal distance from any point on the drill rig to the nearest power line is greater than 25 ft?	☐	☐	
	If the drill rig is closer than 25 ft to the overhead utility, can the utility be de-energized?	☐	☐	

Subsurface and Overhead Utility Clearance Map **If a client-supplied map is not used to indicate location of subsurface and/or overhead utilities draw a sketch in this area indicating both drilling locations and locations of subsurface and overhead utilities**	Not available

Work Zones **If exclusion zones are necessary because of chemical OR equipment hazards, describe the plan**	Exclusion Zone: To be developed by the subcontractor for remediation work. ERM oversight personnel to observe work zone requirements.
	Contamination Reduction Zone: Same
	Support Zone: Same

Site Access/Control **How do we limit unauthorized entry to the site itself?**	Access Control Procedures: The work area within the building is normally locked and access is controlled by Burly Seal personnel.
DECON Procedures	Decontamination Procedures: To be developed by the subcontractor for remediation work; none required for sampling activities.

Chemicals of Concern

In the section to the right, check any chemicals present onsite in any media (air, soil water).

In the table below, list chemicals suspected or confirmed to be onsite, and provide requested information.

- ☐ Friable Asbestos
- ☐ 3,3'-Dichlorobenzidine
- ☐ Benzidine
- ☐ beta-Propiolactone
- ☐ N-Nitrosomethylamine
- ☐ Lead
- ☐ Benzene
- ☐ Acrylonitrile
- ☐ Methylenedianiline
- ☐ alpha-Napthylamine
- ☐ bis-Chloromethyl ether
- ☐ 4-Aminodiphenyl
- ☐ 2-Acetylaminoflourene
- ☐ Vinyl chloride
- ☐ Chromium (VI)
- ☐ Coke oven emissions
- ☐ Ethylene oxide
- ☐ 1,3-Butadiene
- ☒ **No ERM exposure to these**
- ☐ Methyl chromoethyl ether
- ☐ beta-Napthylamine
- ☐ Ethyleneimine
- ☐ 4-Dimethylaminoazobenzene
- ☐ Inorganic arsenic
- ☐ Cadmium
- ☐ 1,2-Dibromo-3-chloropropane
- ☐ Formaldehyde
- ☐ Methylene chloride

Materials Present or Suspected at Site	Highest Reported Concentration (specify units and sample medium)	Exposure Limit (specify ppm or mg/m^3)	IDLH Level (specify ppm or mg/m^3)	Primary Hazards of the Material (explosive, flammable, corrosive, toxic, volatile, radioactive, biohazard, oxidizer, or other)	Symptoms and Effects of Acute Exposure	Ionization Potential (eV)
Polychlorinated biphenyls (PCBs) - PELs provided are for chlorodiphenyl - 42% and 54% chlorine	73,000 ppm (in oil)	PEL = 0.5/1.0 ppm REL = TLV = 0.5/1.0 ppm Skin Hazard ☒	Ca 5 mg/m3	Toxic	May cause eye or skin irritation; chronic health hazard	
		PEL = REL = TLV = Skin Hazard ☐				
		PEL = REL = TLV = Skin Hazard ☐				
		PEL = REL = TLV = Skin Hazard ☐				

PEL = OSHA Permissible Exposure Limit
REL = NIOSH Recommended Exposure Limit
TLV = ACGIH Threshold Limit Value
IDLH = Immediately Dangerous to Life or Health

Monitoring Equipment: All monitoring equipment on site must be calibrated before and after each use and results recorded				
Instrument (Check all required)	**Task**	**Instrument Reading**	**Action Guideline**	**Comments**
☐ Combustible gas indicator model:	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	0 to 10% LEL	Monitor; evacuate if confined space	
		10 to 25% LEL	Potential explosion hazard	
		>25% LEL	Explosion hazard; interrupt task; evacuate site	
☐ Oxygen meter model:	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	>23.5% Oxygen	Potential fire hazard; evacuate site	
		23.5 to 19.5% Oxygen	Oxygen level normal	
		<19.5% Oxygen	Oxygen deficiency; interrupt task; evacuate site	
☐ Radiation survey meter model:	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Normal background	Proceed	Annual exposure not to exceed 1,250 mrem per quarter Background reading must be taken in an area known to be free of radiation sources
		Two to three times background	Notify SSC	
		>Three times background	Radiological hazard; interrupt task; evacuate site	
☐ Photoionization detector model: ☐ 11.7 eV ☐ 10.6 eV ☐ 10.2 eV ☐ 9.8 eV ☐ _____ eV	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Any response above background to 5 ppm above background	Level C is acceptable Level B is recommended	These action levels are for unknown gases or vapors. After the contaminants are identifed, action levels should be based on the specific contaminants involved.
		>5 to 500 ppm above background	Level B	
		>500 ppm above background	Level A	
☐ Flame ionization detector model:	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Any response above background to 5 ppm above background	Level C is acceptable Level B is recommended	These action levels are for unknown gases or vapors. After the contaminants are identifed, action levels should be based on the specific contaminants involved.
		>5 to 500 ppm above background	Level B	
		>500 above background	Level A	
☐ Detector tube models:	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Specify: <1.2 the PEL >1/2 the PEL	Specify:	The action level for upgrading the level of protection is one-half of the contaminant's PEL. If the PEL is reached, evacuate the site and notify a safety specialist.
☐ Other (specify):	☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5	Specify:	Specify:	

Emergency Response Planning	
In the pre-work briefing and daily tailgate safety meetings, all onsite employees will be trained in the provisions of emergency response planning, site communication systems, and site evacuation routes. **Signal a site emergency or medical emergency with three blasts of a loud horn (car horn, fog horn, or similar device).** **To complete this section, attach a hospital route map to the HASP.**	**All work-related incidents must be reported. For all medical emergencies, call 911 or the local emergency number. For non-emergency incidents, you must:** • Give appropriate first aid care to the injured or ill individual and secure the scene. • Immediately call Incident Intervention at (888) 449-7787 (available 24 hours/7 days per week). • Notify the Project Manager and/or H&S Officer after calling Incident Intervention. • Enter the safety event into the ECS within 24 hours. **In the event of an emergency that necessitates evacuation of the work task area or the site as a whole, the following procedures shall occur:** • The ERM site safety contact will contact all nearby personnel using the onsite communications system to advise of the emergency. • Personnel will proceed along site roads to a safe distance upwind from the hazard source. • Personnel will remain in that area until the site safety contact or other authorized individual provides further instruction. **In the event of a severe spill or leak, site personnel will follow the procedures listed below:** • Evacuate the affected area and relocate personnel to an upwind location. • Inform the ERM site safety contact, an ERM office, and a site representative immediately. • Locate the source of the spill or leak, and stop the source if it is safe to do so and appropriately trained personnel are onsite to do so. • Begin containment and recovery of spilled or leaked materials. • Notify appropriate local, state, and federal agencies after obtaining client consent to do so. **In the event of severe weather, site personnel will follow the procedures listed below:** • Site work shall not be conducted during severe weather, including high winds and lightning. • In the event of severe weather, stop work, lower any equipment (drill rigs), and evacuate the affected area.

Emergency Contacts	Name	Location	Phone	Cell Phone
Hospital (attach map)	Mountain West Medical Center	Tooele, UT	435-843-3600	
Police	Tooele Police	Tooele, UT	911	
Fire	Tooele Fire	Tooele, UT	911	
Project Manager	Teri Peterson	Salt Lake City, UT	801-595-8400	408-420-8588
Field Manager (if not PM)	Garrett Rigard	Salt Lake City, UT	801-595-8400	570-233-1260
Field Safety Officer (if not PM)	Garrett Rigard	Salt Lake City, UT	801-595-8400	570-233-1260
Division H&S Contact	Steven Perkins	Irvine, CA	949-623-4700	714-928-3608
Region H&S Contact	Rick Ecord	Atlanta, GA	404-816-6606	404-769-4561
Incident Intervention	WorkCare	N/A	888-449-7787	N/A
SSC Experienced Person	Garrett Rigard	Salt Lake City, UT	801-595-8400	570-233-1260
Subcontractor Safety Contact	TBD			

Acknowledgement	***I have read, understood, and agree with the information set forth in this Health & Safety Plan, and will follow guidance in the plan and in the ERM North America Health and Safety manual. I understand the training and medical monitoring requirements for conducting activities covered by this WARN and have met these requirements.*** ***ERM has prepared this plan solely for the purpose of protecting the health and safety of ERM employees. Subcontractors, visitors, and others at the site are required to follow provisions in this document at a minimum, but must refer to their organization's health and safety program for their protection.***		
Printed Name	Signature	Organization	Date
Approval Signatures **Signatures in this section indicate the signing employee will comply with and enforce this WARN HASP, as well as procedures and guidelines established in the ERM NA H&S. Signatures in this section also indicate that any subcontractors performing work under contract to ERM have met the minimum safety standards in the ERM Subcontractor Prequalification Process.**	Project Manager		Date:
	Partner in Charge		Date:

Google maps

Directions to Mountain West Medical Center
2055 North Main Street, Tooele, UT 84074 - (435) 843-3600
5.7 mi – about **14 mins**

D Ave, Tooele, UT 84074

1.	Head **southeast** on **D Ave** toward **Garnet St**	go 0.2 mi total 0.2 mi
2.	Turn left at **Garnet St** About 2 mins	go 0.9 mi total 1.0 mi
3.	Take the 2nd right onto **K Ave**	go 0.2 mi total 1.2 mi
4.	Continue onto **Feldspar St** About 1 min	go 0.4 mi total 1.7 mi
5.	Turn right at **W Utah Ave** About 3 mins	go 1.7 mi total 3.4 mi
6.	Turn left at **N Main St** About 5 mins	go 2.2 mi total 5.6 mi
7.	Turn left at **W 2000 N/2000N** About 1 min	go 430 ft total 5.7 mi

Mountain West Medical Center
2055 North Main Street, Tooele, UT 84074 - (435) 843-3600

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.

Directions weren't right? Please find your route on maps.google.com and click "Report a problem" at the bottom left.

Working in an Active Facility

No.	Issues	These Issues Have Been Considered Before Work (Check each box considered)	What Additional Actions are Necessary Before Beginning Work? (State Them)
Personnel Management			
1	Does the team have directions on where to park so that risk from truck and other traffic is lessened	X	Normal parking lot south of building
2	Does the team have instructions on where to enter the facility so that there is no likelihood of entering operating areas or upsetting facility security	X	Normal entrance
3	Does you know of, and will the team have access to all the necessary PPE for working on the site?	X	
4	Is there a plan to define the rules concerning unaccompanied movement within the facility?	X	ERM will notify the site contact when onsite
5	Is there a plan in place to ensure that the team is aware of emergency response requirements while in the plant?	X	ERM will notify the site contact when onsite
6	Is there a plan in place to ensure that the team will be informed of chemical and process hazards that might be encountered during your site work?	X	The portion of the facility where ERM will be working is not currently in operation
7	Are you aware of any types of health conditions or status that could make it unsafe to work in specific areas of the plant (such as asthma, skin condition, allergies, or pregnancy)?	X	None

ADDITIONAL ADVISORY INFORMATION

Hazards	**Control Measures**	**Comments & Follow Up**
Other moving vehicles including trucks	Visitor parking areas, walkways, designated vehicular gates	Park in designated areas, be alert to truck and other traffic while entering/leaving the plant.
Chemical contact and exposure	Facility engineering controls, plant boundaries and signs, use of required PPE	Know plant limits on touring alone, follow plant signs and rules, wear the required PPE
Walking and working surface hazards	Well-maintained walkways, aisles, stairs, railings, attention to work area	Do not go into potentially unsafe areas, avoid badly cluttered/contaminated/poorly lit areas
Plant emergencies from fire, explosion, or other	Facility engineering and operational controls, alarms, response plans and drills.	Ensure emergency response to alarms is explained/follow plant rules on working alone
High Noise Levels	Engineering controls, use of hearing protection, normally limited time in high noise areas.	Wear hearing protection if the plant requires this or there is potential for your discomfort or distraction from the noise.
Moving plant vehicles	Be observant of all moving facility equipment and back-up alarms.	
Working at Elevated Heights	Railings	There should be no need to work at elevated heights in normal facility work.
Confined Spaces (pits, vessels, bag houses, sewers)	May be labeled with warning "Do Not Enter" signs and secured against inadvertant entry.	Do not enter confined spaces on any facility unless you have been formally trained on confined space entry and the plant's CSE program AND your safety advisor has been consulted
Extreme Temperatures (hot or cold)	Pre-planning for anticipated weather conditions, planned breaks from extreme exposures	Consider facility tours and outside work during the most comfortable part of the day
Working Alone/ injured and unattended	Initial decisions on ERM's moving alone in the facility and property, determining sign-in and sign-out rules, and letting people know where you are going and anticipated length of time.	If working alone, then heightened awareness of potentially risky situations is essential.

Hazards	Control Measures	Comments & Follow Up
Contact with moving production equipment and live electrical equipment	Machine guards, closed electrical cabinets, warning signs and barriers	DO NOT TOUCH any plant equipment unless it is reliably not under power and you have asked permission.

North America Job Hazard Analysis
Work in Active Facilities

Project Name: Project Number: Job / Task Name: JHA No.: 3

Document Routing	
FSO	Retain copy in site health & safety file, amend to HASP as necessary.
Project Manager	Retain copy in the office health & safety file, amend to HASP as necessary.

Instructions:	**This JHA has been developed and approved by the North America Safety Team. Prior to conducting fieldwork. site-specific hazards related to this task must be incorporated by the project team. Once completed, the JHA should be reviewed regularly with site personnel who will be performing this task.**

Task Description:

General guidelines for working safely in facilities where active operations are occurring and other personnel are performing work

Hazard Analysis:

Task Step	Hazard	Control Measures
Plan ahead for the site visit	Operational and safety items unplanned for prior to visiting the site can cause significant delay	Know ahead of time where any specific parking and entry locations are, as well as training or drug testing required prior to site entry. Ask your site contact/escort to explain any pre-entry requirements. Have the following personal protective equipment with you and wear it while working: • Steel-toe boots • Long pants • Safety glasses • Hard hat • Safety goggles (if splash hazards exist) • Chemical resistant gloves (if needed)

North America Job Hazard Analysis
Work in Active Facilities

Project Name: Project Number: Job / Task Name: JHA No.: 3

Task Step	Hazard	Control Measures
Perform Site Work	Employees may encounter moving vehicles/trucks/forklifts.	Be aware of traffic patterns on the site, including designated forklift lanes.
	Employees may be exposed to chemicals.	Include chemicals known to pose health risks in your WARN HASP for the site, and determine their exposure limits.
	There may be uneven terrain, unguarded holes or wall openings, and other slip, trip, and fall hazards.	For any fieldwork, wear steel-toe boots with enough ankle support. If an area is overly cluttered, poorly lit, or posted signs indicate these hazards, avoid the area if possible.
	A site emergency may happen while you are working onsite.	List the facility emergency planning information in the WARN HASP and have a copy of it with you at all times. Stay with your site escort at all times.
	You may encounter confined spaces.	If you encounter posted signs stating "DANGER – Confined Space – Do Not Enter", do not enter the space. Be alert to other areas where entry or exit appears to be limited.
	High noise levels may be present.	If a noise dosimeter is not available, use the following rule of thumb. If you are standing close to another person and have to raise your voice to be understood by them, hearing protection is needed.
	Highly mechanized equipment may be present in the area, posing electrical hazards and pinch hazards.	Do not touch plant equipment unless you verify it is not powered and permission has been given to you.

North America Job Hazard Analysis
Work in Active Facilities

Project Name: Project Number: Job / Task Name: JHA No.: 3

Task Step	Hazard	Control Measures
Working Alone	Any injury or illness that occurs to an employee working alone can become very serious if they are not able to reach another person for assistance.	If a Level 2 or 3 WARN HASP has been prepared, do not work alone. If working alone is authorized, establish a communication plan in your WARN HASP and follow it completely. Also stay in close communication with your site contact/escort. If you become ill or injured when working alone, immediately call 911 for serious emergencies, or WorkCare's Incident Intervention service for other types of illnesses or injuries. The WorkCare Incident Intervention phone number is 1-800-II-XPRTS. Know the contact information and route to the nearest medical facility.

Personal Protective Equipment Required for this Task:

Type	Description
None	

Training Required for this Task:

Type	Description
None	

Forms Associated with this Task:

Type	Description
Work in Active Facilities Checklist	Checklist covering items associated with working in active facilities. The checklist may be used to perform pre-job risk assessment.
WorkCare Incident Intervention Wallet Card	Wallet-sized card to be carried by all ERM employees containing contact information for the Incident Intervention service.

Project Name: Project Number: Job / Task Name: JHA No.: 3

WorkCare Incident Intervention Wall Poster	11″ x 17″ poster containing contact information for the Incident Intervention service. This poster should be displayed in each permanent office location and in short-term field office locations.

Site-Specific Job Hazard Analysis Completed by:

Name	Date

North America Job Hazard Analysis
Operating Vehicles

Project Name: Project Number: Job / Task Name: JHA No.: 5

Document Routing	
FSO	Retain copy in site health & safety file, amend to HASP as necessary.
Project Manager	Retain copy in the office health & safety file, amend to HASP as necessary.

Instructions:	**This JHA has been developed and approved by the North America Safety Team. Prior to conducting fieldwork. site-specific hazards related to this task must be incorporated by the project team. Once completed, the JHA should be reviewed regularly with site personnel who will be performing this task.**

Task Description:

Operating vehicles for work, including personal vehicles, company-owned non-commercial small trucks, and rental vehicles.

Hazard Analysis:

Task Step	Hazard	Control Measures
Inspect the Vehicle	Tire pressure, brakes, steering, headlights and other vehicle equipment malfunction can contribute to vehicle accidents and property damage. Loose articles inside the vehicle and carried in truck beds or on trailers can shift and cause distractions or traffic accidents.	Use the "ERM Vehicle Safety Form" to document daily inspections of the vehicle. In certain cases, a client-required form may be used instead. Do not operate any vehicle if its safety is in question. During vehicle inspection make sure any loose articles either inside the vehicle or in truck beds/on trailers are well-secured.
Get in and out of the Vehicle	Hands, hair, or loose clothing can be caught in doors, trunk covers, and other vehicle equipment, causing injury.	When entering or exiting a vehicle, pay attention to what you are doing. ERM has had incidents occur simply from being rushed and not paying attention during vehicle entry/exit.

North America Job Hazard Analysis
Operating Vehicles

Project Name: Project Number: Job / Task Name: JHA No.: 5

Task Step	Hazard	Control Measures
Drive the Vehicle	Operating a vehicle presents many different hazards to employees that must be simultaneously mitigated.	Only allow ERM employees to drive motor vehicles (authorized employees with a current drivers license). Before moving vehicles always put your seat belt on, and stop using handheld electronics. Make sure any food or drink is secured and any electronics are programmed (GPS). When moving vehicles, follow all posted speed limits and posted signs. Do not pick up hitch-hikers, and never transport people in truck beds.
Driving when Fatigued	Operating a vehicle after a full day of work or when you are fatigued drastically decreases focus and response time, and increasing the risk of being involved in a vehicle accident.	Avoid driving more than 8 hours in one workday. If the number of hours driving to/from a jobsite combined with the number of hours to be worked on the site will equal more than 14 total hours, alternate arrangements should be arranged. Be aware of your fatigue level while driving and stop to rest if you feel overly tired.
Stay Focused on the Road	Doing anything that distracts you from the road for more than 2 seconds highly increases the risk of being involved in a vehicle accident. In particular, driver inattention due to hand-held mobile phone use is currently thought to be responsible for approximately 80% of all vehicle accidents.	Do not operate a hand-held mobile phone while driving. Use a hands-free mobile solution instead, such as a Bluetooth headset or hardwired earpiece. In some cases, all mobile phone use while driving (including answering and dialing), may be prohibited by our client. Do not perform activities while driving that will take your attention off the road for more than 2 seconds. A few of these types of activities could include programming GPS', applying makeup, changing the radio, or eating while driving. When these sorts of activities must be performed, pull to the side of the road and stop.

North America Job Hazard Analysis
Operating Vehicles

Project Name: Project Number: Job / Task Name: JHA No.: 5

Task Step	Hazard	Control Measures
Pull a Trailer	Many drivers are unfamiliar or inexperienced with pulling trailers, increasing the risk of being involved in a vehicle accident.	If you are uncomfortable pulling a trailer do not do so. Arrange for an alternate, experienced driver. Be aware that it takes longer to speed up and slow down when pulling a trailer, and that visibility may be reduced significantly. Make sure your vehicle is capable to pull the weight of the trailer and its contents. Inspect the trailer to ensure brake and turn signals work properly and in concert with the main vehicles signals, and that tire pressure is acceptable. Make sure trailer is attached securely to the main vehicle and the safety chain or other backup attachment device is in-place. Evenly distribute weight on any trailers pulled.
Leaving the Vehicle	Leaving personal valuables and company equipment/documents in abandoned vehicles may attract thieves.	Turn off the engine and lock any vehicle being left for even a short period of time when not on a secure jobsite. If the vehicle will be left for long periods or overnight, remove any company documents, computers, and equipment, personal valuables, or any items that would attract thieves.
Report and Document Vehicle Accidents and Property Damage	Improper documentation of vehicle accidents and property damage caused by vehicle operation place ERM at risk.	No matter how minor a vehicle accident or property damage event is, report it as a safety event. If involved in a vehicle accident, always call the police so a report will be available, to protect your liability, and to protect ERM liability. Take as many pictures as you can of the accident scene if you can do so without placing yourself in further danger.

North America Job Hazard Analysis
Operating Vehicles

Project Name: Project Number: Job / Task Name: JHA No.: 5

Task Step	Hazard	Control Measures
Drive a Commercial Vehicle	Driving vehicles alone or in combination (with a trailer, for example) with Gross Motor Vehicle Weight (GMVW) greater than 10,000 pounds carries additional regulatory requirements. Not addressing these requirements places ERM at risk.	Check the plaque on the inside of the driver-side door for the GMVW. If the weight is greater than 10,000 pounds contact a member of the North America Safety Team for further assistance. Do not operate the vehicle unless you have received proper training and have required supplies (such as logbooks).
Rent a Vehicle	Only certain car rental agencies have negotiated contracts, rates, and insurance coverage with ERM. Renting a vehicle from another agency exposes you and ERM to unnecessary liability and risk.	If possible, rent vehicles using the Cain Travel website, and from an ERM authorized car rental agency. If not possible to rent from one of these, you must purchase collision damage and personal accident insurance at the time of rental. Currently, authorized rental car agencies include: • Enterprise Car Rental • Hertz Car Rental

Personal Protective Equipment Required for this Task:

Type	Description
Vehicle Safety Kit for Personal or Company-Owned Vehicles	Includes small fire extinguisher (ABC), first aid kit, spare tire/jack, jumper cables, flashlight, flares or lighted triangles, reflective vest, and disposable or digital camera (for documenting accidents)

Training Required for this Task:

Type	Description
ERM Safe Driving	E-learning course instructing employees on ERM vehicle safety policy and practice.

Forms Associated with this Task:

Type	Description
ERM Vehicle Safety Form	Includes items that should be inspected regularly on motorized vehicles.

North America Job Hazard Analysis
Operating Vehicles

Project Name: Project Number: Job / Task Name: JHA No.: 5

Site-Specific Job Hazard Analysis Completed by:

Name	Date

North America Job Hazard Analysis
ERM Actions During Subsurface Clearance and Drilling

Project Name: Project Number: Job / Task Name: JHA No.: 6

Document Routing	
FSO	Retain copy in site health & safety file, amend to HASP as necessary.
Project Manager	Retain copy in the office health & safety file, amend to HASP as necessary.

Instructions:	**This JHA has been developed and approved by the North America Safety Team. Prior to conducting fieldwork. site-specific hazards related to this task must be incorporated by the project team. Once completed, the JHA should be reviewed regularly with site personnel who will be performing this task.**

Task Description:

General guidelines for working safely when performing any ground penetrating activities (excluding surface soil sampling) and ERM personnel activities during overseeing drilling.

Hazard Analysis:

Task Step	Hazard	Control Measures
Identify a Client Contact Person	Client contacts that are not familiar with the site layout could cause critical information to be missed during safety planning.	Determine degree of knowledge of our client contact by evaluating their current job duties at the site, length of time they have worked at the site, and time in their current job. If the ERM team does not feel comfortable with the level of experience of our client contact, take additional measures to ensure all pertinent subsurface utilities and services information is gathered.
Engage Subcontractors	Subcontractors who have not been evaluated against ERM minimum safety standards or who do not meet minimum safety standards may pose more risk.	Use only ERM subcontractors who are identified as having met our minimum safety standards. In cases where using an already-qualified subcontractor is not possible, ensure extra precautions are taken to provide safety oversight to the work.
Appoint an ERM Subsurface Clearance "Experienced Person" to the project	ERM employees who are not experienced with SSC issues may not recognize critical zones or clues to other site utilities/services.	Ensure a "SSC Experienced Person" is assigned to the project to provide oversight of ground penetrations and to mentor less experienced ERM employees.

North America Job Hazard Analysis
ERM Actions During Subsurface Clearance and Drilling

Project Name: Project Number: Job / Task Name: JHA No.: 6

Task Step	Hazard	Control Measures
Gather site-specific subsurface information	Incomplete or inaccurate site utility/service drawings may lead the ERM project team to incorrect conclusions regarding what utilities/services are onsite.	Obtain the most recent "as-built" drawings and additional site information such as easements, rights-of-way, historical plot plans, etc. to assist making decisions about other actions that will be required at the site.
Develop the HASP	Using incorrect documents in safety planning may lead to not considering all pertinent information.	A Level 2 WARN HASP for Intrusive Work (minimum) must be used when performing any ground penetrations, with the exception of surface soil sampling. The Level 2 HASP contains a "Site Services Model" that ERM uses to evaluate SSC hazards.
Develop the Site Services Model	Critical zones and a whole-site view of utilities and services at the site are more difficult to do if not put into the Site Services Model.	Use the Site Services Model to identify gaps in knowledge from all drawings and other verbal information from our client contact. Identify locations of key isolation and shutoffs closest to the work area for each type of utility/service.
Make Preliminary Determinations	Not recognizing or identifying critical zones poses great hazard to ERM employees in the field from contact with electricity or other utilities.	Establish critical zones and excavation buffers (if needed) for the work. Initial critical zone determinations may change in the field but are a good starting point in hazard identification.
Identify Preliminary Ground Disturbance Locations	Planning ground disturbance locations inside critical zones poses great hazard to ERM employees in the field from contact with electricity or other utilities.	Ensure critical zones have been identified using the Site Services Model and then identify locations outside those critical zones up-front, if possible. If a ground disturbance inside a critical zone is absolutely necessary, notify the site PIC and obtain guidance from him/her before proceeding.
Public and/or Private Utility Markout	Not having utilities marked may lead to a subsurface clearance strike.	Contact public and private utility markout services giving them enough time to respond. A minimum of 24-hour notification to utility locators is required in most states, and may vary higher in some states.
Conduct the Site Walk	Inexperienced people conducting the site walk may miss pertinent information regarding utilities and/or services.	The "SSC Experienced Person" must lead the site walk and should be accompanied by our client contact. Each ground disturbance location should be approved by our client contact (written approval preferred, verbal approval acceptable).

North America Job Hazard Analysis
ERM Actions During Subsurface Clearance and Drilling

Project Name: Project Number: Job / Task Name: JHA No.: 6

Task Step	Hazard	Control Measures
Inspect Each Ground Disturbance Location	Inexperienced people conducting inspection may miss pertinent information regarding utilities and/or services.	The "SSC Experienced Person" must lead inspection of each Ground Disturbance Location. Any visual clues of subsurface obstruction/utilities should be documented. Critical zones may have to be reassessed at this point. Use the SSC Checklist to document this inspection for each point inside a critical zone, at a minimum.
Finalize Critical Zone Determinations	Not performing this verification step in the field may lead to a SSC strike.	Use information gathered during pre-planning, utility markout, and site walk/inspection to verify critical zones that have been previously established. Revise critical zones as necessary. Use the SSC Checklist to document points inside critical zones. If points are confirmed inside critical zones, either step out and relocate the ground disturbance location, or contact the PIC for additional guidance.
Oversee setup of drilling equipment	Overhead electrical/other lines may come in contact with drill rigs. Materials stored in the vicinity of drill rigs may pose various hazards to employees.	Ensure drill rigs are set up in areas where they will not contact overhead lines when being positioned. The minimum distance for drill rig clearance is 25 feet unless special permission is granted by the utility company. When a drill rig must be maneuvered in tight quarters, the presence of a second person is required to ensure adequate clearance. If backing-up is required, two ground guides will be used: one in the direction the rig is moving and the other in the operator's normal field of vision. Move tools, materials, cords, hoses, and debris to prevent trip hazards and contact with moving drill rig parts. Secure tools and equipment subject to displacement or falling. Store any flammable materials away from ignition sources and in approved containers.

North America Job Hazard Analysis
ERM Actions During Subsurface Clearance and Drilling

Project Name:
Project Number:
Job / Task Name:
JHA No.: 6

Task Step	Hazard	Control Measures
Physically Clear all Ground Disturbance Locations	Employees performing physical clearance could contact underground utility/service lines.	Use cable avoidance tools at each location that must be physically cleared (OSHA requirement). If using a hand-auger, ensure insulated handles are in-place before their use.
	Drill rig could damage electrical/utility/service lines if not physically cleared first.	Mechanical ground penetration should not commence until a ground disturbance location is physically cleared. In certain situations drilling may occur without physical clearance – consult with the project PIC prior to making this determination.
Commence Drilling Operations	Rotating equipment could pull employees into equipment.	Do not wear loose or frayed clothing, loose long hair, or loose jewelry while working around rotating equipment. Tuck shirt-tails into pants. Never walk directly behind or beside drill rigs without the drill rig operator's knowledge. Keep all non-essential personnel out of the drill rig work area.
	Poorly functioning drill-rig equipment could expose employees to hazardous conditions.	Ensure drill rigs and other machinery used is inspected daily by competent, qualified individuals. Instruct drill rig operators to report any abnormalities such as equipment failure, oozing liquids or unusual odors so they can be dealt with before proceeding with work. Do not eat, drink, or smoke near the drill rig.
	Noisy environments may make it difficult to communicate by vocal means.	Wear hearing protection at all times when in the vicinity of the drill rig, or when you must raise your voice to be heard by co-workers. Maintain visual contact with the drill rig operator at all times and establish hand-signal communications for use when verbal communication is difficult.

North America Job Hazard Analysis
ERM Actions During Subsurface Clearance and Drilling

Project Name: Project Number: Job / Task Name: JHA No.: 6

Task Step	Hazard	Control Measures
Complete Drilling Operations	Equipment allowed to remain running poses pinch-point and potential explosion hazards to employees.	Shut down drill rigs before repairing or lubricating parts (except those that must be in motion for lubrication). Shut down mechanical equipment prior to and during fueling operations. When refueling or transferring fuel, containers and equipment must be bonded to prevent the buildup of static electricity.

Personal Protective Equipment Required for this Task:

Type	Description
Insulated hand-augers	Hand-augers fitted with rubber handles, or other non-conductive material.

Training Required for this Task:

Type	Description
SSC Classroom Training	Initial classroom training detailing the ERM subsurface clearance process, tools, and forms.
SSC Experienced Person	At least one must be present on all sites involving SSC. The Experienced Person will both give SSC expertise in project execution and mentor less experienced employees.

Forms Associated with this Task:

Type	Description
SSC Checklist	Checklist detailing the ERM SSC process, and providing tools to ensure critical zones and excavation buffers are properly identified and validated in the field.
SSC Mentorship Card	The SSC Mentorship Card provides Experienced Persons with topics to be covered with less experienced employees on SSC sites, and also documents mentoring of the less experienced employees.
Daily Drill Rig Inspection Form	Form required to be used by ERM subcontractors to document daily inspection of drill rigs. This form should be provided by the drill rig operating company. Completed forms should be kept with the

North America Job Hazard Analysis
ERM Actions During Subsurface Clearance and Drilling

Project Name: Project Number: Job / Task Name: JHA No.: 6

	HASP and filed in project files.

Site-Specific Job Hazard Analysis Completed by:

Name	Date

North America Job Hazard Analysis
Engaging and Managing Subcontractors

Project Name: Project Number: Job / Task Name: JHA No.: 9

Document Routing	
FSO	Retain copy in site health & safety file, amend to HASP as necessary.
Project Manager	Retain copy in the office health & safety file, amend to HASP as necessary.

Instructions:	**This JHA has been developed and approved by the North America Safety Team. Prior to conducting fieldwork. site-specific hazards related to this task must be incorporated by the project team. Once completed, the JHA should be reviewed regularly with site personnel who will be performing this task.**

Task Description:

Guidelines for managing safety of ERM-hired subcontractors to ensure they work safely and ERM liability is minimized.

Hazard Analysis:

Task Step	Hazard	Control Measures
Choose Subcontractor to Perform Work	Lack of executed contractual documentation may increase ERM liability.	The project PIC and/or PM must ensure a signed, executed contract is in-place prior to subcontractors performing work on the jobsite for ERM.
	Insurance documents collected during the safety prequalification process may not be sufficient to meet specific client contractual requirements.	The project PIC and/or PM must ensure that insurance certificates on-file for subcontractors meet or exceed contractual insurance requirements mandated by ERM clients. If the insurance certificate on-file is out-of-date or does not represent sufficient coverage, the project PIC and/or PM must obtain an updated insurance certificate from the subcontractor prior to the subcontractor performing work on the jobsite for ERM.
	Selecting subcontractors that do not meet ERM minimum safety criteria can result in poor safety performance on ERM projects.	Consult the North America "Subcontractor Information" page and select a subcontractor that meets ERM minimum safety criteria. If selection of an already-prequalified subcontractor is not possible due to business considerations or client wishes, provide enhanced subcontractor oversight on the jobsite.

North America Job Hazard Analysis
Engaging and Managing Subcontractors

Project Name:
Project Number:
Job / Task Name:
JHA No.: 9

Task Step	Hazard	Control Measures
Prepare Site HASP Documents	Not informing ERM-hired subcontractors of ERM safety requirements for their work may expose employees to hazardous conditions and cause unnecessary project delays.	The project PIC and/or PM must ensure the subcontractor has received a copy of the ERM HASP and supporting documentation prior to mobilization to the jobsite. The subcontractor must be made aware that their personnel must follow provisions in the ERM HASP at a minimum, but that they may not rely on ERM documents for their employee's health and safety protection.
	Not obtaining authorized subcontractor signatures on ERM HASPs may expose ERM to additional liability.	Prior to any jobsite work proceeding, obtain the signature of an authorized representative for the subcontractor on the ERM HASP. Also, have the subcontractor's authorized representative designate one of their employees, by name, to serve as the jobsite contact for ERM safety concerns. List the jobsite safety contact in the ERM HASP.
	The lack of a specific scope of work for an ERM subcontractor opens the possibility of whether ERM or the subcontractor is responsible for certain aspects of jobsite work.	Specify both the ERM and the subcontractor's scope of work in the ERM HASP document. Ensure that any subcontractor personnel on-site has reviewed and signed the site HASP.
	Any ERM attempt to author safety documents for use during completion of tasks on jobsites by subcontractors may not be sufficient to fully control site safety hazards posed by subcontractor work.	In all cases, require the ERM subcontractor to either develop their own site-specific HASP, or develop Job Hazard Analyses (JHA) for the specific tasks they will perform. Attach these documents to the ERM HASP as appendices.

North America Job Hazard Analysis
Engaging and Managing Subcontractors

Project Name: Project Number: Job / Task Name: JHA No.: 9

Task Step	Hazard	Control Measures
Conduct the Work	On jobsites where ERM uses subcontracted services, additional liability arising from the OSHA "Multi-Employer Worksite Rule" may be present.	Ensure subcontractor work is overseen by ERM personnel at all times. Whenever subcontractor personnel are present on a jobsite performing work, an ERM employee should be present and engaged in the work being performed. Always include subcontractor personnel in daily jobsite tailgate safety meetings and have them indicate their presence and understanding of the information presented by signing the ERM form documenting the meeting. ERM personnel at the jobsite should perform regular safety inspections of the site, including subcontractor activities. Any deficiencies noted during inspections should be forwarded to the subcontractor's jobsite safety contact for resolution and report-back to ERM. For imminent danger situations (those that may cause loss of life or limb), the ERM inspector should stop the subcontractor's work and ensure all on site retreat until the imminent danger hazard is abated. Do not supply subcontractor personnel with personal protective equipment (PPE). If PPE must be provided to subcontractors, ERM personnel must inspect the PPE and document the inspection prior to providing it to subcontractor personnel. If ERM is performing air monitoring for the subcontractor, ensure calibration of air monitoring equipment is done before and after each use. At a minimum, air monitoring equipment must be calibrated at least once per day. Document equipment calibration and file with the site HASP.

North America Job Hazard Analysis
Engaging and Managing Subcontractors

Project Name: Project Number: Job / Task Name: JHA No.: 9

Task Step	Hazard	Control Measures
After Job Completion, Forward Comments to ERM North America Safety Team	Obtaining services from subcontractors who have met ERM minimum safety criteria but have performed poorly on jobsites poses risk to ERM employees on future jobsites.	Submit any comments about the subcontractor's safety performance while working on the ERM jobsite to the ERM North America Safety Team. These comments will be stored in our database and provided to ERM PICs and/or PMs seeking quality subcontractors for future work.

Personal Protective Equipment Required for this Task:

Type	Description
None	

Training Required for this Task:

Type	Description
None	

Forms Associated with this Task:

Type	Description
Subcontractor Safety Prequalification Checklist	ERM form given to subcontractors that collects information necessary to determine whether the subcontractor meets ERM's minimum safety criteria.
Subcontractor Insurance Certificate	Subcontractor-supplied form issued by the subcontractor's insurance carrier or broker evidencing current insurance coverage.

Site-Specific Job Hazard Analysis Completed by:

Name	Date

North America Job Hazard Analysis
Engaging and Managing Subcontractors

Project Name: Project Number: Job / Task Name: JHA No.: 9

North America Job Hazard Analysis
Personal Protective Equipment

Project Name: Project Number: Job / Task Name: JHA No.: 13

Document Routing	
FSO	Retain copy in site health & safety file, amend to HASP as necessary.
Project Manager	Retain copy in the office health & safety file, amend to HASP as necessary.

Instructions:	**This JHA has been developed and approved by the North America Safety Team. Prior to conducting fieldwork. site-specific hazards related to this task must be incorporated by the project team. Once completed, the JHA should be reviewed regularly with site personnel who will be performing this task.**

Task Description:

Guidelines for selection and use of personal protective equipment (PPE). PPE is only to be used after engineering and administrative controls have been considered and found to be non-feasible. Guidance for respiratory protection and fall protection is included in separate JHAs

Hazard Analysis:

Task Step	Hazard	Control Measures
General fieldwork	A head injury could occur from a falling or flying object, or a head injury could be sustained from bumping into something. Wearing a "typical" hardhat around electrical equipment may result in electrical shock.	A hard hat meeting the American National Standards Institute (ANSI) Z-89.1 standard must be worn. These hardhats contain an inner suspension system that should be checked regulatory to ensure straps are not worn and that space exists between the shell of the hardhat and the suspension straps. Electrical shock protection hardhats – Class A for low voltage (up to 2,200 volts), Class B for high voltage (up to 20,000 volts), and Class C for no electrical shock protection.
General fieldwork	A foot injury could occur from a falling or rolling object, or an object may pierce the sole of the shoe. Electrical shock may occur with steel-toe boots.	Steel toe protective footwear should be worn that meets or exceeds the American Society for Testing and Measurement (ASTM) F2413-05 standard. Footwear worn around electrical circuits should also be non-conductive.

North America Job Hazard Analysis
Personal Protective Equipment

Project Name: Project Number: Job / Task Name: JHA No.: 13

Task Step	Hazard	Control Measures
Cutting by hand	Hand injury could occur from handling an object with sharp edges of a fixed open-blade knife.	Fixed open-blade knives (such as pocket knives) may not be used on ERM jobsites, with few exceptions. If their use is required, cut-resistant gloves (such as Kevlar) must be worn and the PM or FSO must be informed prior to their use. Employees performing significant amounts of cutting tool use should wear high-visibility gloves to encourage awareness of where hands are being placed.
Handling chemicals by hand	Dermal exposure to hands from chemicals during soil and/or groundwater sampling.	Wear nitrile or latex protective gloves when handling sample media. Double-layering these gloves is a good idea for added protection. If acidic or caustic chemicals are present, wear outer neoprene or rubber gloves.
O&M or Subsurface Injection	Dermal exposure to body from chemicals during operations and maintenance activities or subsurface liquid injection activities.	When working with commercial, full-strength chemicals ensure splash protection is worn (such as a polyethylene coated suit) and that gloves and boots are taped to the suit to prevent liquid splash.
General fieldwork Work around liquid splash and/or flying particle hazards	Foreign object or liquid splash to the eye.	Safety glasses conforming to the ANSI Z-87 standard must be worn for field activities. Safety glasses are appropriate for use when general eye protection is needed. For liquid splash hazards or hazards from flying particles, tight-fitting safety goggles should be worn. A faceshield should be considered for use when splash hazards from commercial, full-strength chemicals.
Work around active roadways	Struck by moving vehicles when working outside or along a roadway.	High-visibility safety vests should be worn when working in parking lots or by active roadways. Class I may be used when traffic is below 25 mph, Class II for 25-50 mph, and Class 3 for >50 mph.

North America Job Hazard Analysis
Personal Protective Equipment

Project Name: Project Number: Job / Task Name: JHA No.: 13

Task Step	Hazard	Control Measures
Work in high noise environments	Hearing damage from noise exposure greater than 85 decibels.	Attempt to perform work when elevated noise is not an issue. If work must be performed during high noise, wear hearing protection in the form of earplugs or earmuffs. Further details are given in the "Work in High Noise Environments" JHA.
O&M or Lockout/Tagout/Tryout	Electrical shock	Lockout/tagout/tryout should be performed by licensed electricians or others that have been specifically authorized by ERM to do so. PPE appropriate to this work includes a cotton t-shirt, Class II Electrical Arc Protection suit, Class O (low voltage) gloves, and non-conductive footwear.

Training Required for this Task:

Type	Description
Personal Protective Equipment	PPE training, normally included in 8-hour refresher training, provides guidance on the selection, inspection, use, maintenance, and decontamination of different types of PPE

Forms Associated with this Task:

Type	Description
None	

Site-Specific Job Hazard Analysis Completed by:

Name	Date

North America Job Hazard Analysis
Portable Hand and Power Tools

Project Name: Project Number: Job / Task Name: JHA No.: 20

Document Routing	
FSO	Retain copy in site health & safety file, amend to HASP as necessary.
Project Manager	Retain copy in the office health & safety file, amend to HASP as necessary.

Instructions:	**This JHA has been developed and approved by the North America Safety Team. Prior to conducting fieldwork. site-specific hazards related to this task must be incorporated by the project team. Once completed, the JHA should be reviewed regularly with site personnel who will be performing this task.**

Task Description:

Guidelines for working with portable hand and power tools.

Hazard Analysis:

Task Step	Hazard	Control Measures
Gather tools to take to jobsite	An improper tool available at jobsites encourages unsafe behaviors and could lead to injury.	Ensure tools taken to jobsites are kept in optimal condition (sharp, clean, oiled, etc.) to ensure efficient operation. Tools must only be used for their intended purposes – tools should not be used as pry-bars. Ensure power cords attached to powered-equipment are not damaged. Any damaged tool or electrical cord must be tagged and taken out of service.
Using cutting tools	Major and/or minor cuts to personnel	Fixed open-blade knives (such as pocket knives) may not be used on ERM jobsites, with few exceptions. If their use is required, cut-resistant gloves must be worn while using them and the PM or FSO must be informed prior to their use. Employees performing significant amounts of cutting tool use should must high-visibility gloves to encourage awareness of where hands are being placed.

North America Job Hazard Analysis
Portable Hand and Power Tools

Project Name: Project Number: Job / Task Name: JHA No.: 20

Task Step	Hazard	Control Measures
Using screwdrivers	Puncture injuries	Do not hold objects in the palm of your hand and press a screwdriver into it – these objects should be placed on a flat surface. Do not use screwdrivers as hammers, or use screwdrivers with broken handles. Use insulated screwdrivers for work on electrical equipment.
Using hammers	Creation of sparks	Use brass hammers in areas where creating sparks would pose ignition hazards.
	Particles may lodge in employee's eyes	Always use safety glasses when striking any object with a hammer. If hammer-head shows signs of mushrooming, replace it immediately.
	Loose handles may create a projectile hazard	Replace any hammer with a loose handle so the hammer-head does not detach and cause injuries.

Personal Protective Equipment Required for this Task:

Type	Description
High-visibility glove	Gloves typically in fluorescent green, orange, or yellow.
Cut-resistant glove	Limited protection is afforded by leather gloves from cuts. Kevlar gloves provide more protection when significant cut/puncture hazards exist.

Training Required for this Task:

Type	Description
None	

North America Job Hazard Analysis
Portable Hand and Power Tools

Project Name: Project Number: Job / Task Name: JHA No.: 20

Forms Associated with this Task:

Type	Description
None	

Site-Specific Job Hazard Analysis Completed by:

Name	Date

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